

ODP 20-4



The information, specifications, and illustrations in this manual are on the basis of information available at the time it was written. The specifications, torque values, pressures of operation, measurements, adjustments, illustrations, and other items can change at any time. These changes can affect the service of the given product.

For the complete and most current information, contact:

Hogg & Davis, Inc
P.O. Box 405 / 3800 Eagle Loop
Odell, OR 97044-0405
541-354-1001
541-354-1080 Fax

For most recent manual
version please visit:

www.hoggdavis.com

ODP 20-4
2,000 Lb. Four Drum Puller

Table of Contents

Table of Contents - 2 -
Product Warnings..... - 3 -
General Specifications - 4 -
Setup on the Job - 7 -
 Setup of the unit - 7 -
 Position of unit..... - 7 -
 Jack Stands / Outriggers..... - 8 -
 Tie Down/ Brake/ Chock - 8 -
Rope Payout Procedure (Free Wheel)..... - 8 -
Pulling Control..... - 9 -
 Pulling Control..... - 11 -
 Level wind - 11 -
LUBRICATION AND MAINTENANCE - 12 -
 Drawbar inspection - 13 -
15-15 Warranty - 14 -
Parts and other manufacturer manuals - 15 -



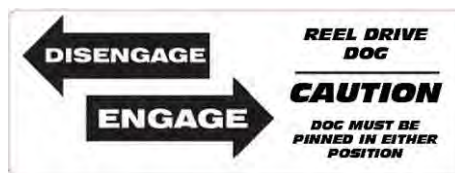
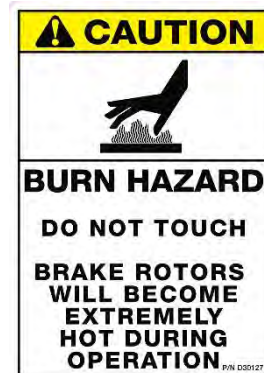
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ODP 20-4 2,000 Lb. Four Drum Puller

Product Warnings



These warning labels and others like it are placed in critical areas of the machine. The warnings are to be read and fully understood prior to operation of the unit.



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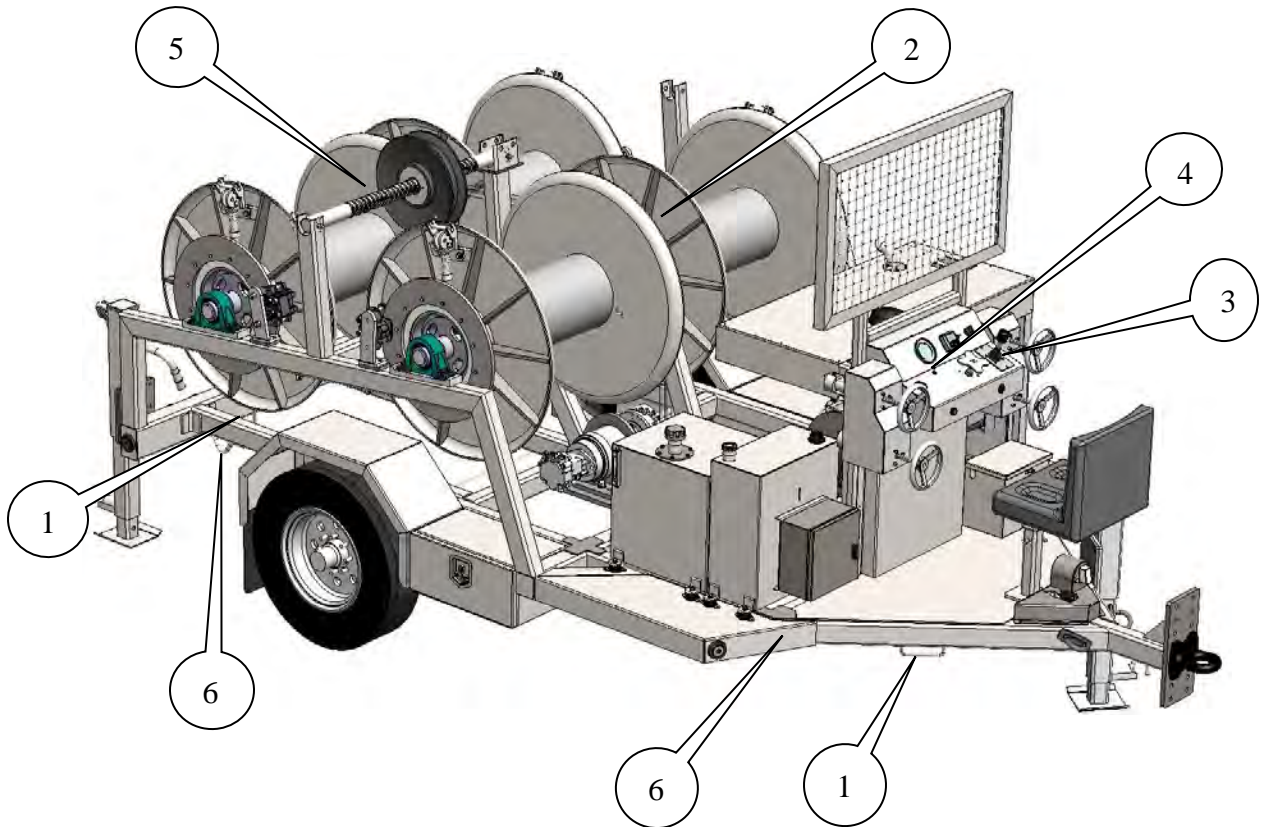


ODP 20-4 2,000 Lb. Four Drum Puller

General Specifications

This unit is designed to install overhead cable/conductor.

- Four Drum Puller
- 2000 lb. Maximum Line Pull – Single Reel
- 36" Rope Reel Diameter
- Rope Capacity 10,600 ft. of 7/16" per reel
- Manual Jack stands (2) Rear – (1) Tongue
- Hydraulic Jack stands (optional)
- Maximum Line Speed 0-4 mph
- Single Axle with Electric Brakes



ODP 20-4 2,000 Lb. Four Drum Puller



INDUSTRIAL / ENGINES / TNV SERIES

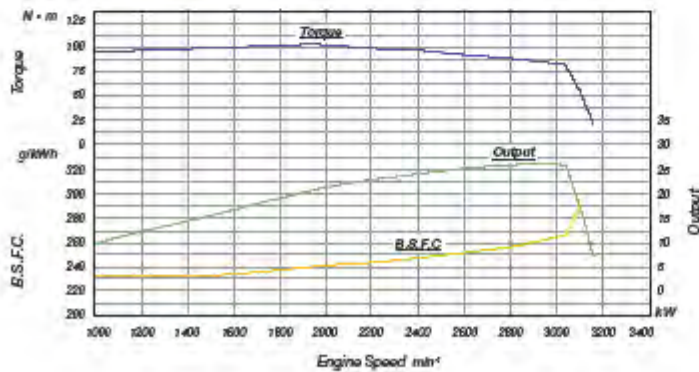


Dimensions, Performance Data & Quick Specs

NET INTERMITTENT POWER (kW/hp) Potencia Neta Intermitente	26.2 / 35.1
RATED SPEED (RPM) Velocidad de Regimen	3000
LENGTH (w/fan) (in/mm) Longitud	24.1 / 611 w/DPF
WIDTH (in/mm) Ancho	21.9 / 556 w/DPF
HEIGHT (in/mm) Altura	34.2 / 868 w/DPF

3TNV88C-DYEM

SPECIFICATION Especificacion	DYEM
CYLINDERS Cilindros	3
BORE X STROKE Diámetro x Carrera	88 x 90 (mm) 3.46 x 3.54 (in)
DISPLACEMENT Cilindrada	1642 (cc) 100.2 (ci)
COMBUSTION TYPE Tipo de Combustion	Common Rail Direct Injection Common Rail de Inyección Directa
ASPIRATION Aspiracion	Naturally Aspirated Aspiracion Natural
GOVERNOR TYPE Tipo de Gobernador	Electronic Control Electrónico



Lubrication System
6.7L Capacity Deep Oil Pan

Electrical System
12V, 55A Alternator

Fuel System
Common Rail System

Cooling System
Water Pump, Belt-driven

Power Take Off
FWH: SAE #5 1-124
FW: SAE 7.5"

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Engine specifications are based on actual operating conditions.
E-3TNV88C-DYEM-300114



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ODP 20-4 2,000 Lb. Four Drum Puller

Operating Instructions

All persons operating this machine must read and understand this manual as well as the operating, danger, and warning decals placed on the machine. Failure to read and understand these items subjects the operator and others to DEATH or SERIOUS INJURY.

Operators shall make themselves familiar with the placement of the following operating and safety features of the machine.

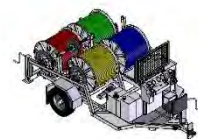
- Grounding Lugs and their placement on Machine (1)
- Drive Chains and Sprockets (2)
- Take Up / Pay-Out / Control (3)
- Engine Controls and Gauges (4)
- Lubrication Points (various)
- Level wind Bearing and Pins (5)
- Tie Down Locations (6)
- Manual Jack stands (standard)
- Hydraulic Jack stands (optional)

Setup on the Job

Setup of the unit

Position of unit

Position the trailer with the centerline of the trailers in line with the pull. Place the unit at a minimum of two times the height of the first block.



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ODP 20-4 2,000 Lb. Four Drum Puller

Jack Stands / Outriggers

Actuate the rear outriggers to stabilize the trailer. Attempt to level the trailer as much as possible. The outriggers have the ability to raise the tires from the ground, but as a rule they should be used to stabilize the load across all contact points on the ground, i.e. Jack stands, tires, front tongue jack stand.

Tie Down/ Brake/ Chock

Chock all wheels and set brakes (if applicable). It should be noted that a fully loaded trailer may exceed the tension desired during the pull. As the pull progresses, the weight of the trailer may increase or decrease, therefore proper securing procedures should be followed during operation. This unit is equipped with tie – down eyes for staking to the ground and it is recommended that the unit stay secured to the tow vehicle whenever possible.

Rope Payout Procedure (Free Wheel)

When beginning the rope payout feature, be sure that the engine is turned off. Ensure that all tension is removed from the pulling rope before attempting to remove drive pin.

Adjust reel brake to provide tension to the reel of rope. Disengage the drive pin from reel to be free wheeled. Begin to pull rope through the blocks while continuing to adjust the over spin brake. When the rope install is completed, re-apply over spin brake to maximum pressure. Rotation of the rope reel shaft may be needed to properly install drive pin. With engine at idle slowly operate in take-up mode to engage the drive pin of reel to be pulled.

Refer to the performance chart for proper hydraulic pressure as it directly relates to conductor tension. ***This chart is located on the control panel of the unit.***

ODP 20-4 2,000 Lb. Four Drum Puller

*****These instructions assume that the operator has set the proper drive pin for the reel to be pulled in. All other reels are to be disengaged with the over spin brake fully applied.**

Pulling Control

The following instructions explain how to properly set up the unit when it is to be used as a puller and have a pulling rope with NO TENSION. DO NOT FOLLOW THESE INSTRUCTIONS WHEN YOU HAVE A ROPE UNDER TENSION!!

1. Apply the brake.
2. Turn the Hydraulic Pressure knob CCW to release pressure
3. Increase to approximately full throttle.
4. Begin to actuate the joystick to take up.
5. Turn the Hydraulic Pressure Control knob and set to 800 psi.
6. Release the joystick into the neutral position.
7. Wait for confirmation from the tension side of the job for readiness
8. Release the brake
9. Increase throttle to full.
10. As the rope reel begins to take up, increase the hydraulic to the maximum line pull desired. As the rope diameter increases on the reel, it might be necessary to adjust the Hydraulic Control Knob to keep the pull moving.
11. Adjust joystick for line speed as also desired.
12. To stop the pull, place control into neutral while applying the brake.

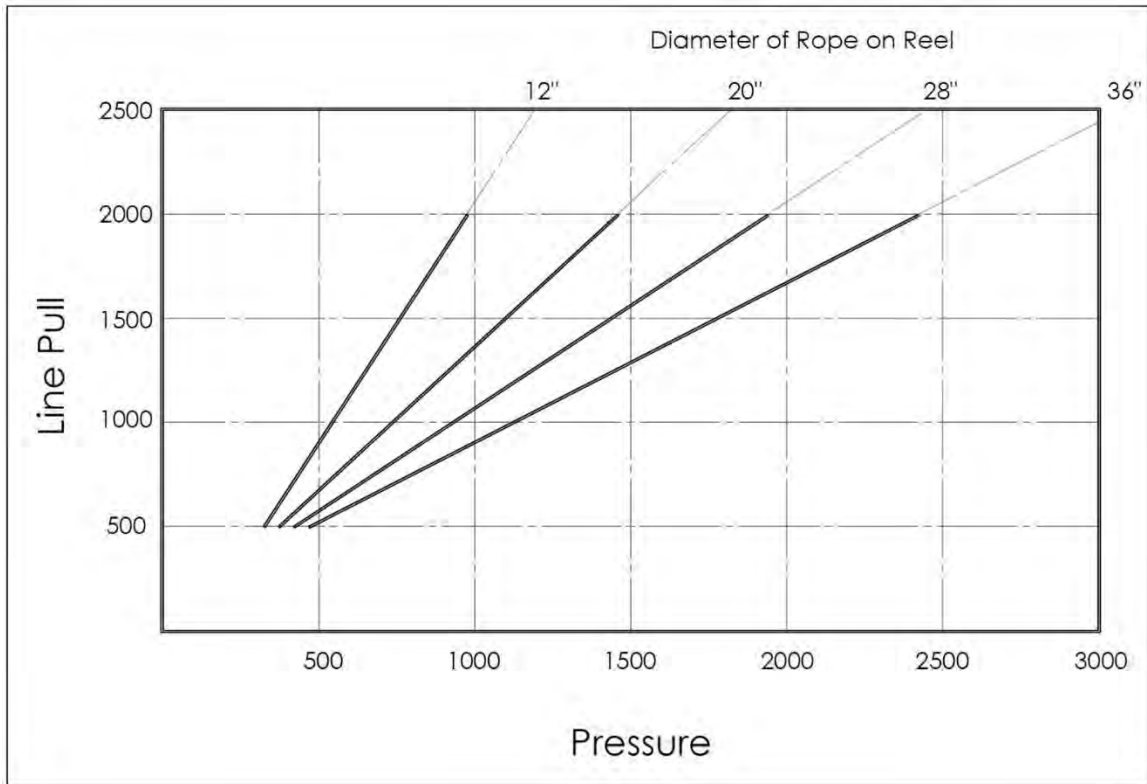


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ODP 20-4
2,000 Lb. Four Drum Puller



WARNING

Failure to understand and follow the line pull graph can result in failure of reels and other major components.

ODP 20-4 2,000 Lb. Four Drum Puller

Pulling Control

The following instructions explain how to properly set up the unit when it is to be used as a puller and have a pulling rope UNDER TENSION. Use of these instructions assumes that all controls are at the same setting when the pulled previously stopped.

1. Begin to slightly actuate the joystick to take up
2. Release the brake
3. Actuate the joystick to take up as desired (if reel does not begin to move, slightly increase the Hydraulic Pressure Control until it does.

Level wind

This unit is equipped with an automatic diamond lead screw level wind system. No manual operation of the unit is required. Make sure shaft is properly pinned and lubricated prior to operation.

IF MACHINE IS TO BE USED FOR FIBRE OPTIC INSTALLATION, REFER TO THE CABLE MANUFACTURER FOR PROPER TENSIONING TECHNIQUES. FAILURE TO CONSULT MANUFACTURER MAY DAMAGE CABLE AND VOID WARRANTY.



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ODP 20-4
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LUBRICATION AND MAINTENANCE

This unit has no set PM schedule beyond that of the engine manufacturers suggested maintenance schedule. This unit should be visually inspected prior to each use while repairing any and all discrepancies prior to use.

Items to be inspected prior to use are:

- Drive Chains and sprockets for wear and slack
- Pintle eye (excessive wear)
- Safety Chains (wear / damage)
- All welds and seams
- Loose or missing fasteners (bolts, nuts, set screws)
- Loose or leaking hydraulic hoses
- Damaged or worn hydraulic hoses
- Brake calipers (loose fittings, hoses, worn linings)
- Brake Pads
- Brake rotors
- Tires and trailer brakes
- Engine and hydraulic system fluid levels.

Lubrication Schedule

- Drive chain and sprockets (daily)
- Reel Shaft Bearings (as needed)
- Reel Bearings (as needed)
- Engine oil as per manufacturers recommendation
- Idler sprocket (daily)
- Axle Bearings (as needed)



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ODP 20-4
2,000 Lb. Four Drum Puller

Drawbar inspection

- Regularly inspect the drawbar for wear and damage. If wear exceeds 1/8", replace the drawbar eye.
- Check all drawbar mounting fasteners for proper torque
- Do not modify or add to the product
- Do not weld on this product without written permission from the factory
- Be sure the drawbar size is compatible with the coupling device on the tow vehicle
- Do not damage the coupling components. Be particularly careful during coupling and uncoupling
- Inspect the coupling device on the tow vehicle for proper locking prior to use
- Consult OSHA and DOT regulations and American Trucking Association guidelines for complete operating procedures.

ODP 20-4 2,000 Lb. Four Drum Puller

15-15 Warranty

Hogg and Davis, Inc. warrants its trailers against defects in material or workmanship for period of 15 months from the date of shipment from Hogg and Davis, Inc. (see General Conditions & Exceptions). Hogg and Davis, Inc. will replace, free of charge, F.O.B. Hogg and Davis, Inc. factory, such parts or parts thereof, that in their judgment have proven defective. Additionally, Hogg and Davis, Inc. will pay reasonable and customary labor charges when defective part is replaced, installed or repaired by a fully authorized Hogg and Davis, Inc. trailer dealer at his facility.

Warranty credit will be issued only upon receipt and inspection of defective parts of at the Hogg and Davis, Inc. factory.

Hogg and Davis, Inc. warrants its trailer main frame assemblies (except pintle eyes or other towing attachments, spindles and axles) against defects in material or workmanship for a period of **15 years** from the date of shipment from Hogg and Davis, Inc. (see General Conditions & Exceptions). Hogg and Davis, Inc. shall replace or repair, in a manner as it shall determine, free of charge, F.O.B. factory, any parts or parts thereof, that in its judgment have proven defective. Additionally, Hogg and Davis, Inc. will pay reasonable and customary labor charges when defective part is replaced, installed or repaired by a fully authorized Hogg and Davis, Inc. trailer dealer at his facility.

General Conditions & Exceptions

All warranties, options and representations made herein shall apply only provide such equipment shall not have been subject to misuse, negligence or accident and has been operated in accordance with factory approved procedures. This warranty does not obligate Hogg and Davis, Inc. or its authorized dealers to bear the cost of parts obtained from or labor performed by unauthorized sources. Nor does it obligate Hogg and Davis, Inc. **or its** authorized dealers to bear the cost of transportation of parts or equipment for repair or **replacement purposes**. This warranty is in lieu of any other warranty, expressed **or implied**, or any other obligation or liability on the part of Hogg and Davis, Inc and no persons or entity is authorized to make any representation beyond those stated herein.

Hogg and Davis, Inc. shall not be held liable for consequential damage of any kind. Hogg and Davis, Inc. also reserves the right to make changes and improvements in its products without incurring any obligation to install any such changes or improvements upon its products previously manufactured.

The above warranty shall not be misconstrued to mean warranty of tires, clutch, transmission assemblies or customer requested accessory equipment other than the warranty extended by their respective manufactures to Hogg and Davis, Inc. In addition, friction, drive rollers are warranted only to extent of bonding failure. All warranties, options and representations made herein are applicable to the original end-user of the product and are not sellable or transferable in any manner.



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Section 2

YANMAR WARRANTIES

	Page
YANMAR Limited Warranty	2-3
What is Covered by this Warranty?	2-3
How Long is the Warranty Period?	2-3
What the Engine Owner must Do:	2-3
To Locate an Authorized YANMAR Industrial Engine Dealer or Distributor:	2-4
What YANMAR will Do:	2-4
What is not Covered by this Warranty?	2-4
Warranty Limitations:	2-5
Warranty Modifications:	2-5
Questions:	2-5
Emission System Warranty	2-6
YANMAR Co., Ltd. Limited Emission Control System Warranty - USA Only	2-6
Your Warranty Rights and Obligations:	2-6
Manufacturer's Warranty Period:	2-6
Warranty Coverage:	2-7
Warranted Parts:	2-7
Exclusions:	2-8
Owner's Warranty Responsibilities:	2-8

YANMAR LIMITED WARRANTY

What is Covered by this Warranty?

YANMAR warrants to the original retail purchaser that a new YANMAR TNV series industrial engine will be free from defects in material and/or workmanship for the duration of the warranty period.

Note: YANMAR engines may be equipped with external components including, but not limited to: wiring harnesses, electrical devices, control panels, radiators, air filters, fuel filters, and/or exhaust systems that are supplied and/or installed by manufacturers other than YANMAR. For warranty information on such external components, please contact the machine or component manufacturer directly or see your authorized YANMAR dealer or distributor.

This warranty is provided in lieu of all other warranties, express or implied. YANMAR specifically disclaims any implied warranties of merchantability or fitness for a particular purpose, except where such disclaimer is prohibited by law. If such disclaimer is prohibited by law, then implied warranties shall be limited in duration to the life of the express warranty.

How Long is the Warranty Period?

The YANMAR standard limited warranty period runs for a period of **twenty-four (24) months or two-thousand (2000) engine operation hours**, whichever occurs first. An extended limited warranty of thirty-six (36) months or three thousand (3000) engine operating hours, whichever occurs first, is provided for these specific parts only: the cylinder block, cylinder head, crankshaft forging, connecting rods, flywheel, flywheel housing, camshaft, timing gear, and gear case. The warranty period for both the standard limited warranty and the extended limited warranty (by duration or operation hours) begins on the date of delivery to the original retail purchaser and is valid only until the applicable warranted duration has passed or the operation hours are exceeded, whichever comes first.

What the Engine Owner must Do:

If you believe your YANMAR engine has experienced a failure due to a defect in material and/or workmanship, you must contact an authorized YANMAR industrial engine dealer or distributor within thirty (30) days of discovering the failure. You must provide proof of ownership of the engine, proof of the date of the engine purchase and delivery, and documentation of the engine operation hours. Acceptable forms of proof of delivery date include, but are not limited to: the original warranty registration or sales receipts or other documents maintained in the ordinary course of business by YANMAR dealers and/or distributors, indicating the date of delivery of the YANMAR product to the original retail purchaser. This information is necessary to establish whether the YANMAR product is still within the warranty period. Thus, YANMAR strongly recommends you register your engine as soon as possible after purchase in order to facilitate any future warranty matters.

You are responsible for the transportation of the engine to and from the repair location as designated by YANMAR.

YANMAR limited warranty - continued**To Locate an Authorized YANMAR Industrial Engine Dealer or Distributor:**

You can locate your nearest authorized YANMAR industrial engine dealer or distributor by visiting the YANMAR Co., Ltd. website at:

<http://www.yanmar.co.jp> (The Japanese language page will be displayed.) For English language “click” on “English Page.”)

- “Click” on “Network” in the website heading to view the “Yanmar Worldwide Network.”
- Choose and “Click” on the desired product group.
- “Click” on the Icon closest to your region.
- “Click” on the desired country or associate company to locate your nearest authorized YANMAR industrial engine dealer or distributor.
- You may also contact YANMAR by clicking on “Inquiry” in the website heading and typing in your question or comment.

What YANMAR will Do:

YANMAR warrants to the original retail purchaser of a new YANMAR engine that YANMAR will make such repairs and/or replacements at YANMAR’s option, of any part(s) of the YANMAR product covered by this warranty found to be defective in material and/or workmanship. Such repairs and/or replacements will be made at a location designated by YANMAR at no cost to the purchaser for parts or labor.

What is not Covered by this Warranty?

This warranty does not cover parts affected by or damaged by any reason other than defective materials or workmanship including, but not limited to, accident, misuse, abuse, “Acts of God,” neglect, improper installation, improper maintenance, improper storage, the use of unsuitable attachments or parts, the use of contaminated fuels, the use of fuels, oils, lubricants, or fluids other than those recommended in your YANMAR Operation Manual, unauthorized alterations or modifications, ordinary wear and tear, and rust or corrosion. This warranty does not cover the cost of parts and/or labor required to perform normal/scheduled maintenance on your YANMAR engine. This warranty does not cover consumable parts such as, but not limited to, filters, belts, hoses, fuel injector nozzles, lubricants and cleaning fluids. This warranty does not cover the cost of shipping the product to or from the warranty repair facility.

*YANMAR limited warranty - continued***Warranty Limitations:**

The foregoing is YANMAR's only obligation to you and your exclusive remedy for breach of warranty. Failure to follow the requirements for submitting a claim under this warranty may result in a waiver of all claims for damages and other relief. **In no event shall YANMAR or any authorized industrial engine dealer or distributor be liable for incidental, special or consequential damages.** Such consequential damages may include, but not be limited to, loss of revenue, loan payments, cost of rental of substitute equipment, insurance coverage, storage, lodging, transportation, fuel, mileage, and telephone costs. The limitations in this warranty apply regardless of whether your claims are based on breach of contract, tort (including negligence and strict liability) or any other theory. Any action arising hereunder must be brought within one (1) year after the cause of action accrues or it shall be barred. Some states and countries do not allow certain limitations on warranties or for breach of warranties. **This warranty gives you specific legal rights, and you may also have other rights which vary from state to state and country to country.** Limitations set forth in this paragraph shall not apply to the extent that they are prohibited by law.

Warranty Modifications:

Except as modified in writing and signed by the parties, this warranty is and shall remain the complete and exclusive agreement between the parties with respect to warranties, superseding all prior agreements, written and oral, and all other communications between the parties relating to warranties. **No person or entity is authorized to give any other warranty or to assume any other obligation on behalf of YANMAR, either orally or in writing.**

Questions:

If you have any questions or concerns regarding this warranty, please call or write to the nearest authorized YANMAR industrial engine dealer or distributor or other authorized facility.

EMISSION SYSTEM WARRANTY

YANMAR CO., LTD. LIMITED EMISSION CONTROL SYSTEM WARRANTY - USA ONLY

Your Warranty Rights and Obligations:

■ **California**

The California Air Resources Board (CARB), the Environmental Protection Agency (EPA) and YANMAR Co., Ltd. hereafter referred to as YANMAR, are pleased to explain the **emission control system warranty** on your industrial compression-ignition engine. In California, model year 2000 or later off-road compression-ignition engines must be designed, built and equipped to meet the state’s stringent anti-smog standards. In all states, 1998 and later non-road compression-ignition engines must be designed, built and equipped to meet the United States EPA emissions standards. YANMAR warrants the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system, Electronic Control Unit, Exhaust Gas Recirculation (EGR) system, after treatment system (DPF) and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

Where a warrantable condition exists, YANMAR will repair your non-road compression-ignition engine at no charge to you including diagnosis, parts and labor.

Manufacturer’s Warranty Period:

The model year 1998 or later certified and labeled non-road compression-ignition engines are warranted for the periods listed below. If any emission-related part on your engine is found to be defective during the applicable warranty period, the part will be replaced by YANMAR.

If your engine is certified as	And its maximum power is	And its rated speed is	Then its warranty period is
Variable speed or constant speed	kW < 19	Any speed	1,500 hours or two (2) years whichever comes first. In the absence of a device to measure the hours of use, the engine has a warranty period of two (2) years.
Constant speed	19 ≤ kW < 37	3,000 rpm or higher	1,500 hours or two (2) years whichever comes first. In the absence of a device to measure the hours of use, the engine has a warranty period of two (2) years.
Constant speed	19 ≤ kW < 37	Less than 3,000 rpm	3,000 hours or five (5) years whichever comes first. In the absence of a device to measure the hours of use, the engine has a warranty period of five (5) years.
Variable speed	19 ≤ kW < 37	Any speed	3,000 hours or five (5) years whichever comes first. In the absence of a device to measure the hours of use, the engine has a warranty period of five (5) years.
Variable speed or constant speed	kW ≥ 37	Any speed	3,000 hours or five (5) years whichever comes first. In the absence of a device to measure the hours of use, the engine has a warranty period of five (5) years.

Limited emission control system warranty - USA only - continued**Warranty Coverage:**

This warranty is transferable to each subsequent purchaser for the duration of the warranty period. Repair or replacement of any warranted part will be performed at an authorized YANMAR industrial engine dealer or distributor.

Warranted parts not scheduled for replacement as required maintenance in the operation manual shall be warranted for the warranty period. Warranted parts scheduled for replacement as required maintenance in the operation manual are warranted for the period of time prior to the first scheduled replacement. Any part repaired or replaced under warranty shall be warranted for the remaining warranty period.

During the warranty period, YANMAR is liable for damages to other engine components caused by the failure of any warranted part during the warranty period.

Any replacement part which is functionally identical to the original equipment part in all respects may be used in the maintenance or repair of your engine, and shall not reduce YANMAR's warranty obligations. Add-on or modified parts that are not exempted may not be used. The use of any non-exempted add-on or modified parts shall be grounds for disallowing a warranty.

Warranted Parts:

This warranty covers engine components that are a part of the emission control system of the engine as delivered by YANMAR to the original retail purchaser. Such components may include the following:

- Fuel injection system
- Electronic control system
- Cold start enrichment system
- Intake manifold
- Turbocharger systems
- Exhaust manifold
- EGR system
- Positive crankcase ventilation system
- After treatment system (Diesel Particulate Filter)
- Hoses, belts, connectors and assemblies associated with emission control systems

Since emissions-related parts may vary slightly between models, certain models may not contain all of these parts and other models may contain the functional equivalents.

Limited emission control system warranty - USA only - continued**Exclusions:**

Failures other than those arising from defects in material and/or workmanship are not covered by this warranty. The warranty does not extend to the following: malfunctions caused by abuse, misuse, improper adjustment, modification, alteration, tampering, disconnection, improper or inadequate maintenance or use of non-recommended fuels and lubricating oils; accident-caused damage, and replacement of expendable items made in connection with scheduled maintenance. YANMAR disclaims any responsibility for incidental or consequential damages such as loss of time, inconvenience, loss of use of equipment/engine or commercial loss.

Owner's Warranty Responsibilities:

As the engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. YANMAR recommends that you retain all documentation, including receipts, covering maintenance on your non-road compression-ignition engine, but YANMAR cannot deny warranty solely for the lack of receipts, or for your failure to ensure the performance of all scheduled maintenance.

YANMAR may deny your warranty coverage of your non-road compression-ignition engine if a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

Your engine is designed to operate on diesel fuel only. Use of any other fuel may result in your engine no longer operating in compliance with applicable emissions requirements.

You are responsible for initiating the warranty process. You must present your engine to a YANMAR dealer as soon as a problem exists. The warranty repairs should be completed by the dealer as expeditiously as possible. If you have any questions regarding your warranty rights and responsibilities, or would like information on the nearest YANMAR dealer or authorized service center, you should contact YANMAR America Corporation.

Website: www.yanmar.com

E-mail: CS_support@yanmar.com

Toll free telephone number: 1-800-872-2867, 1-855-416-7091

SPN	FMI	TEXT TRANSLATION
28	3	% Accelerator Position #3 (Throttle 2) Voltage Above Normal or Shorted to High Source H
28	4	Percent Accelerator Position #3 (Throttle 2) Voltage Below Normal or Shorted to Low Source
29	3	Percent Accelerator Position #2 (Throttle 1) Voltage Above Normal or Shorted to High Source
29	4	Percent Accelerator Position #2 (Throttle 1) Voltage Below Normal or Shorted to Low Source
91	3	Accelerator Pedal Position (Multi-State Throttle) Voltage Above Normal, or Shorted to High Source
91	4	Accelerator Pedal Position (Multi-State Throttle) Voltage Below Normal or Shorted to Low Source
91	9	Accelerator Pedal Position A valid throttle message is not being received or is late
91	14	Accelerator Pedal Position Throttle signal voltage is or has been out of range
94	1	Fuel Delivery Pressure Pressure Very low
94	3	Fuel Delivery Pressure Fuel Rail Pressure Voltage out of range high
94	4	Fuel Delivery Pressure Fuel Rail Pressure Voltage out of range low
94	10	Fuel Delivery Pressure Pressure dropping too fast
94	13	Fuel Delivery Pressure Out of calibration
94	16	Fuel Delivery Pressure High fuel pressure
94	17	Fuel Delivery Pressure No rail fuel pressure
94	18	Fuel Delivery Pressure Low fuel pressure
97	0	Water In Fuel Indicator Water In Fuel Detected
97	3	Water In Fuel Indicator Water In Fuel Voltage out of range high
97	4	Water In Fuel Indicator Water In Fuel Voltage out of range low
97	16	Water In Fuel Indicator Water In Fuel Detected
97	31	Water In Fuel Indicator Water In Fuel Detected
100	1	Engine Oil Pressure Low oil pressure
100	3	Engine Oil Pressure Voltage Above Normal or Shorted to High Source
100	4	Engine Oil Pressure Voltage Below Normal or Shorted to Low Source
100	16	Engine Oil Pressure Oil pressure reading incorrect
100	18	Engine Oil Pressure Low oil pressure
105	0	Intake Manifold 1 Temperature High manifold air temperature
105	3	Intake Manifold 1 Temperature Voltage Above Normal or Shorted to High Source
105	4	Intake Manifold 1 Temperature Voltage Below Normal or Shorted to Low Source
105	16	Intake Manifold 1 Temperature High manifold air temperature
107	0	Air Filter Differential Pressure Plugged air filter condition detected
107	31	Air Filter Differential Pressure Plugged air filter condition detected
110	0	Engine Coolant Temperature High coolant temperature
110	3	Engine Coolant Temperature Voltage Above Normal or Shorted to High Source
110	4	Engine Coolant Temperature Voltage Below Normal or Shorted to Low Source
110	15	Engine Coolant Temperature High coolant temperature
110	16	Engine Coolant Temperature High coolant temperature
111	1	Coolant Level Low coolant level
158	2	Keyswitch Intermittent
158	17	Keyswitch Circuit problem
174	0	Fuel Temperature High fuel temperature
174	3	Fuel Temperature Voltage Above Normal or Shorted to High Source
174	4	Fuel Temperature Voltage Below Normal or Shorted to Low Source
174	15	Fuel Temperature High fuel temperature
174	16	Fuel Temperature High fuel temperature
174	31	Fuel Temperature Voltage out of range
189	31	Rated Engine Speed Speed Derate Condition Exists due to fault
190	0	Engine Speed Engine overspeed
190	2	Engine Speed Data Erratic, Intermittent or Incorrect
190	3	Engine Speed Voltage Above Normal or Shorted to High Source
190	4	Engine Speed Voltage Below Normal or Shorted to Low Source
190	5	Engine Speed Circuit is open
190	16	Engine Speed Engine overspeed

SPN	FMI	TEXT TRANSLATION
611	3	Injector Wiring Shorted to battery
611	4	Injector Wiring Shorted to ground
620	3	Sensor Supply Voltage 1 (+5V DC) Voltage Above Normal or Shorted to High Source
620	4	Sensor Supply Voltage 1 (+5V DC) Voltage Below Normal or Shorted to Low Source
627	1	Power Supply Low voltage to injectors
627	4	Power Supply Power interruption
629	13	Reprogram Controller ECU problem
629	19	ECU to Pump Communications Error ECU not receiving messages from Pump
632	2	Fuel Shutoff Valve Fuel Shutoff Error Detected
632	5	Fuel Shutoff Valve Fuel Shutoff Non-Functional
632	11	Fuel Shutoff Valve Fuel Shutoff Solenoid circuit is open or shorted
636	2	Engine Position Sensor Timing signal error
636	8	Engine Position Sensor Timing signal error
636	10	Engine Position Sensor Timing signal error
637	2	Timing (Crank) Sensor Timing signal error
637	7	Timing (Crank) Sensor Timing signal error
637	8	Timing (Crank) Sensor Timing signal error
637	10	Timing (Crank) Sensor Timing signal error
639	13	CAN Bus The CAN bus failure
651	5	Injector Cylinder #1 The current to the injector is less than expected
651	6	Injector Cylinder #1 The current to the injector increases too rapidly
651	7	Injector Cylinder #1 The injector fuel flow is lower than expected
652	5	Injector Cylinder #2 The current to the injector is less than expected
652	6	Injector Cylinder #2 The current to the injector increases too rapidly
652	7	Injector Cylinder #2 The injector fuel flow is lower than expected
653	5	Injector Cylinder #3 The current to the injector is less than expected
653	6	Injector Cylinder #3 The current to the injector increases too rapidly
653	7	Injector Cylinder #3 The injector fuel flow is lower than expected
654	5	Injector Cylinder #4 The current to the injector is less than expected
654	6	Injector Cylinder #4 The current to the injector increases too rapidly
654	7	Injector Cylinder #4 The injector fuel flow is lower than expected
655	5	Injector Cylinder #5 The current to the injector is less than expected
655	6	Injector Cylinder #5 The current to the injector increases too rapidly
655	7	Injector Cylinder #5 The injector fuel flow is lower than expected
656	5	Injector Cylinder #6 The current to the injector is less than expected
656	6	Injector Cylinder #6 The current to the injector increases too rapidly
656	7	Injector Cylinder #6 The injector fuel flow is lower than expected
729	3	Inlet Air Heater Driver #1 Inlet air heater stuck on
729	5	Inlet Air Heater Driver #1 Inlet air heater will not turn on
833	2	Rack Position Sensor Error
833	3	Rack Position Sensor Rack Position Voltage above normal
833	4	Rack Position Sensor Rack Position Voltage below normal
834	2	Rack Actuator Rack Error
834	3	Rack Actuator Rack Actuator Circuit voltage above normal
834	5	Rack Actuator Rack Actuator Circuit open
834	6	Rack Actuator Rack Actuator Circuit grounded
834	7	Rack Actuator Rack Position Error
970	2	Auxiliary Engine Shutdown Switch External Engine Shutdown Switch intermittent
970	11	External Engine Protection Shutdown External Engine Protection Shutdown active
970	31	Auxiliary Engine Shutdown Switch External Engine Protection Shutdown active
971	31	Engine Derate Switch External Derate input has been activated
1041	2	Start Signal Indicator Start Signal Missing
1041	3	Start Signal Indicator Start Signal Always Active

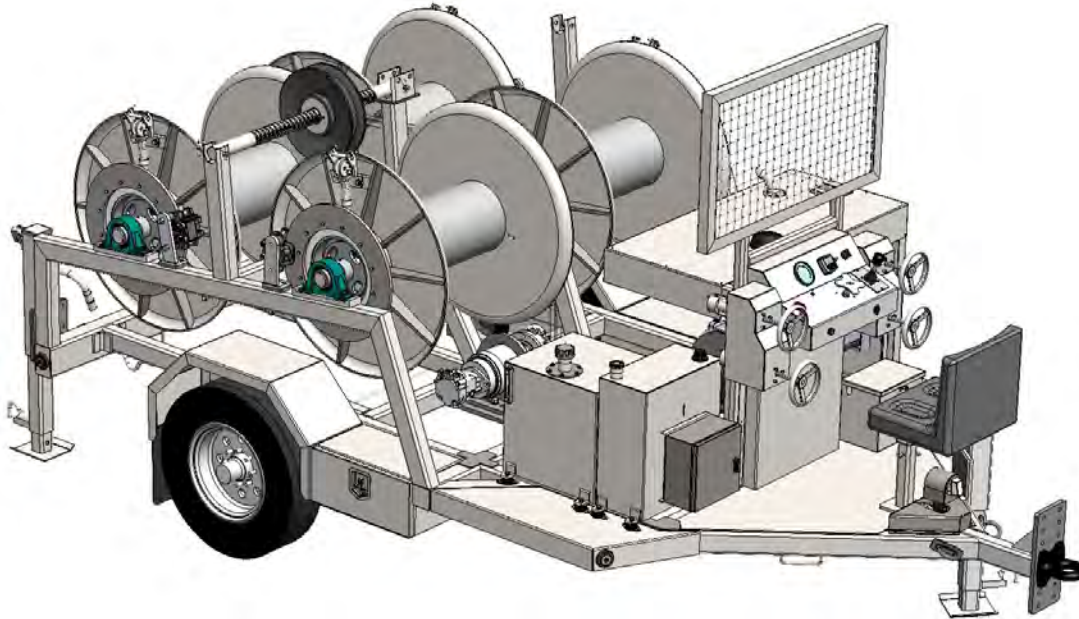
SPN	FMI	TEXT TRANSLATION
1076	0	Fuel Injection Pump Fuel Control Valve Error
1076	1	Fuel Injection Pump Fuel Control Valve Error
1076	2	Fuel Injection Pump Fuel Control Valve Error
1076	3	Fuel Injection Pump Fuel Control Valve Error
1076	5	Fuel Injection Pump Fuel Control Valve Error
1076	6	Fuel Injection Pump Fuel Control Valve Error
1076	7	Fuel Injection Pump Fuel Control Valve Error
1076	10	Fuel Injection Pump Fuel Control Valve Error
1076	13	Fuel Injection Pump Fuel Control Valve Error
1077	7	Fuel Injection Pump Controller
1077	11	Fuel Injection Pump Controller
1077	12	Fuel Injection Pump Controller
1077	19	Fuel Injection Pump Controller
1077	31	Fuel Injection Pump Controller Power derated
1078	7	Fuel Injection Pump Speed/Position Sensor Error
1078	11	Fuel Injection Pump Speed/Position Sensor Error
1078	31	Fuel Injection Pump Speed/Position Sensor VP44 Unable to Achieve Desired Timing
1079	3	Sensor Supply Voltage 1 (+5V DC) Voltage Above Normal or Shorted to High Source
1079	4	Sensor Supply Voltage 1 (+5V DC) Voltage Below Normal or Shorted to Low Source
1080	3	Sensor Supply Voltage 2 (+5V DC) Voltage Above Normal or Shorted to High Source
1080	4	Sensor Supply Voltage 2 (+5V DC) Voltage Below Normal or Shorted to Low Source
1109	31	Engine Protection System Approaching Shutdown Approaching Shutdown
1110	31	Engine Protection System Engine has been shutdown
1347	5	Fuel Pump Assembly #1 The circuit is open, shorted to ground, or overloaded
1347	7	Fuel Pump Assembly #1 Rail pressure control mismatch
1347	10	Fuel Pump Assembly #1 Low fuel flow
1348	5	Fuel Pump Assembly #2 The circuit is open, shorted to ground, or overloaded
1348	10	Fuel Pump Assembly #2 Low fuel flow
1485	2	ECU Main Relay Pump power relay fault
1569	31	Engine Protection Torque Derate Fuel derate limit condition exists
2000	6	Fuel Injection Pump Fuel Control Valve Error
2000	13	Security Violation The proper controller has not been installed

2G-ECO Governor Controller DTC Table

Remark	DTC			Description	J1939 Lamp Status			
	J1939 Format				MIL	RSL	AWL	PL
	SPN (Hex)	SPN (DEC)	FMI					
	4BA	1210	4	Engine Fuel Rack Position Sensor : Shorted to low source			X	
			3	Engine Fuel Rack Position Sensor : Shorted to high source		X (Engine drive)	X (E-ECU start)	
	5B	91	4	Accelerator Pedal Position Sensor "A" : Shorted to low source			X	
			3	Accelerator Pedal Position Sensor "A" : Shorted to high source			X	
			2	Accelerator Pedal Position Sensor "A" : Intermittent fault				
			1	Accelerator Pedal Position Sensor "A" : Below normal operational range (SAE J1843)			X	
			0	Accelerator Pedal Position Sensor "A" : Above normal operational range (SAE J1843)			X	
	1D	29	15	Accelerator Pedal Position Sensor "A" : Not available (SAE J1843)			X	
			4	Accelerator Pedal Position Sensor "B" : Shorted to low source			X	
			3	Accelerator Pedal Position Sensor "B" : Shorted to high source			X	
			2	Accelerator Pedal Position Sensor "B" : Intermittent fault				
			1	Accelerator Pedal Position Sensor "B" : Below normal operational range (SAE J1843)			X	
	6C	108	0	Accelerator Pedal Position Sensor "B" : Above normal operational range (SAE J1843)			X	
			8	Accelerator Pedal Position Sensor "B" : Communication fault			X	
			15	Accelerator Pedal Position Sensor "B" : Not available (SAE J1843)			X	
	470	1136	4	Barometric Pressure Sensor : Shorted to low source	X			
			3	Barometric Pressure Sensor : Shorted to high source	X			
			2	Barometric Pressure Sensor : Intermittent fault				
			0	Barometric Pressure Sensor : Intermittent fault				
	6E	110	4	E-ECU Internal Temperature Sensor : Shorted to low source			X	
			3	E-ECU Internal Temperature Sensor : Shorted to high source			X	
			2	E-ECU Internal Temperature Sensor : Intermittent fault				
			0	E-ECU Internal Temperature : Too High				X
	437	1079	4	Engine Coolant Temperature Sensor : Shorted to low source			X	
			3	Engine Coolant Temperature Sensor : Shorted to high source (FUEL INJ PUMP SPEED SENSOR)				X
			2	Engine Coolant Temperature Sensor : Intermittent fault				
	9E	158	0	Engine Coolant Temperature : Too High				X
			1	System Voltage : Too Low				X
	436	1078	4	System Voltage : Too High				X
	436	1078	4	Engine Fuel Injection Pump Speed Sensor : Shorted to low source		X (Both)	X (Ether)	
*	7F8A2	522402	4	Auxiliary Speed Sensor : Shorted to low source		X (Both)	X (Ether)	
	7F801	522241	4	Engine Fuel Rack Actuator Relay : Circuit fault A		X		
			3	Engine Fuel Rack Actuator Relay : Circuit fault B		X		
			7	(Reserved)				
	7F803	522243	2	Engine Fuel Rack Actuator Relay : Intermittent fault				
			4	Air Heater Relay : Circuit fault A	X			
			3	Air Heater Relay : Circuit fault B	X			
	7F802	522242	2	Air Heater Relay : Intermittent fault				
			4	Cold Start Device : Circuit fault A	X			
			3	Cold Start Device : Circuit fault B	X			
	7F80B	522251	2	Cold Start Device : Intermittent fault				
			4	EGR Stepping Motor "A" : Circuit fault A	X			
			3	EGR Stepping Motor "A" : Circuit fault B	X			
	7F80C	522252	4	EGR Stepping Motor "B" : Circuit fault A	X			
			3	EGR Stepping Motor "B" : Circuit fault B	X			
	7F80D	522253	4	EGR Stepping Motor "C" : Circuit fault A	X			
			3	EGR Stepping Motor "C" : Circuit fault B	X			
	7F80E	522254	4	EGR Stepping Motor "D" : Circuit fault A	X			
			3	EGR Stepping Motor "D" : Circuit fault B	X			
	64	100	4	Oil Pressure Switch : Shorted to low source			X	
			1	Oil Pressure : Too Low				X
	A7	167	4	Battery Charge Switch : Shorted to low source			X	
			1	Charge warning				X
*	7F84A	522314	0	Engine Coolant Temperature : Abnormal temperature				X
*	7F853	522323	0	Air Cleaner : Mechanical Malfunction				X
*	7F859	522329	0	Oily Water Separator : Mechanical Malfunction				X
	BE	190	0	Engine speed : Over speed Condition		X		
	27E	638	4	Engine Fuel Rack Actuator : Shorted to low source		X		
			3	Engine Fuel Rack Actuator : Shorted to high source		X		
			7	Engine Fuel Rack Actuator : Mechanical Malfunction		X		
			2	Engine : Malfunction		X		
	27F	639	12	High Speed CAN Communication : Communication fault			X	
	276	630	2	E-ECU internal fault : EEPROM Check Sum Error (Data Set 2)		X		
			12	E-ECU internal fault : EEPROM ReadWrite fault			X	
	274	628	12	E-ECU internal fault : FlashROM Check Sum Error (Main Software)		X		
			2	E-ECU internal fault : FlashROM Check Sum Error (Data Set 1)		X		
			2	E-ECU internal fault : FlashROM Check Sum Error (Data Set 2)		X		
	5CD	1485	4	E-ECU Main Relay : Shorted to low source			X	
	7F9E7	522727	12	E-ECU internal fault : Sub-CPU Error A			X	
			12	E-ECU internal fault : Sub-CPU Error B			X	
			12	E-ECU internal fault : Sub-CPU Error C			X	
			12	E-ECU internal fault : Sub-CPU Error C			X	
*	7F9E8	522728	12	E-ECU internal fault : Engine Map Data Version Error		X		
*	7F9EA	522730	12	Immobilizer : CAN Communication fault			X	
			8	Immobilizer : Pulse Communication fault			X	
	4B2	1202	2	Immobilizer : System fault			X	

Remark : Yanmar original DTC

Parts Manual



The information, specifications, and illustrations in this manual are on the basis of information available at the time it was written. The specifications, torque values, pressures of operation, measurements, adjustments, illustrations, and other items can change at any time. These changes can affect the service of the given product.

For the complete and most current information, contact:

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P.O. Box 405 / 3800 Eagle Loop
Odell, OR 97044-0405
541-354-1001
541-354-1080 Fax

For most recent manual
version please visit:
www.hoggdavis.com



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ver. 2.0

Table of Contents

<i>Isometric View</i>	1
<i>Curbside View</i>	2
<i>Rear View</i>	3
<i>Full Reel Assembly</i>	4
<i>Reel Assembly</i>	5
<i>Reel Lock Pin (New)</i>	6
<i>Reel Lock Pin (Old)</i>	7
<i>Levelwind Assembly</i>	8
<i>Overspin Brake</i>	9
<i>HD Brake Cylinder</i>	10
<i>Planetary Drive (Old)</i>	11
<i>Planetary Drive (New)</i>	12
<i>Hydraulic Pumps</i>	13
<i>Control Panel</i>	14
<i>Control Panel Tier 4</i>	15
<i>Hydraulic/Fuel Tanks</i>	16
<i>Operator Seat</i>	17
<i>Jackstands</i>	18
<i>Electrical Hood</i>	19
<i>Std Trailer Lights</i>	20
<i>LED Trailer Lights</i>	21
<i>Electrical Schematics</i>	22-26
<i>Hydraulic Schematics</i>	27
<i>Trailer Specs.</i>	28-29
<i>Wheel Torque Specs.</i>	30-31
<i>Decals/ Decal Locations</i>	32-36
<i>Brake Bleeding Inst.</i>	37

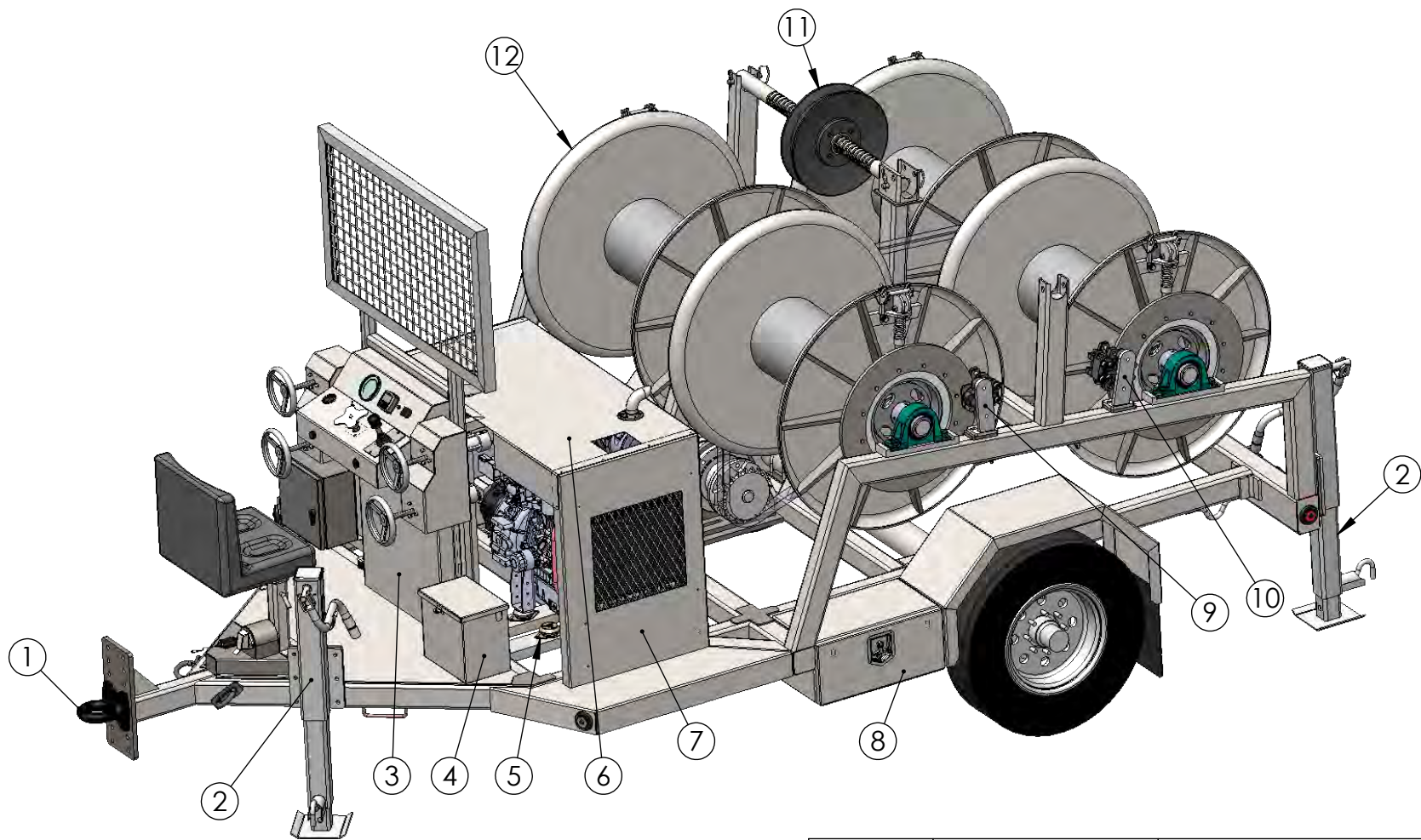
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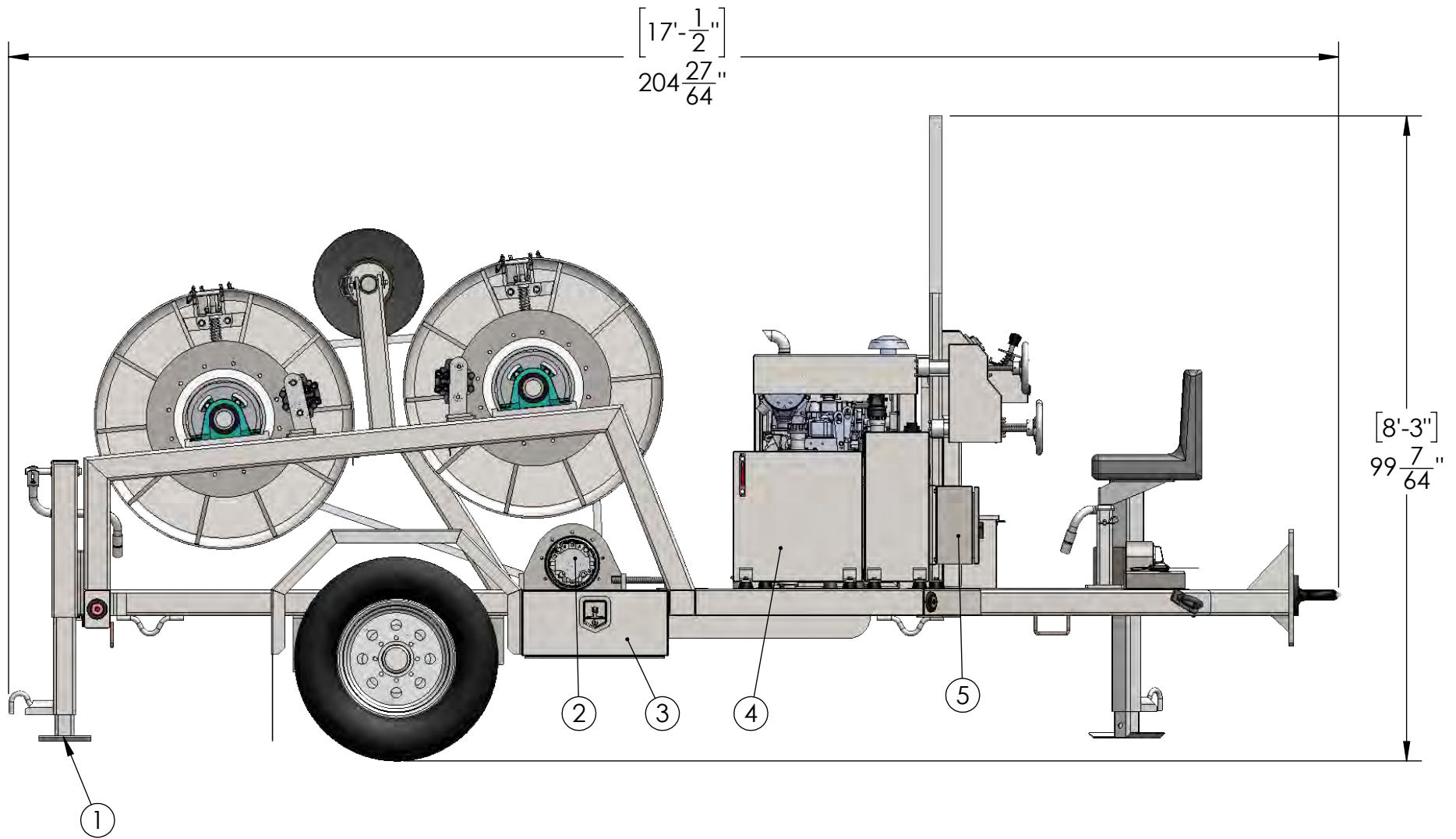
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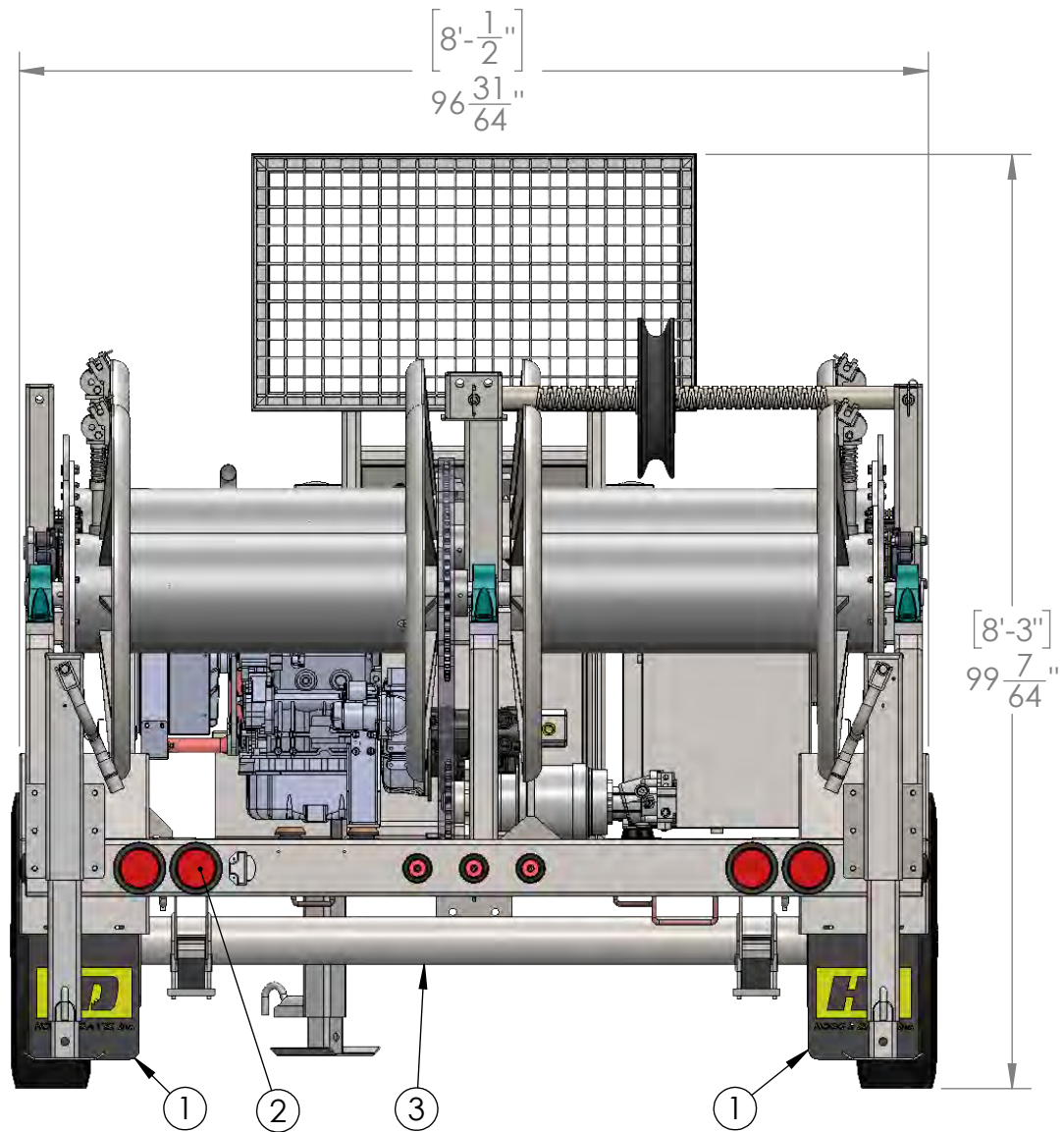




ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	E04017	Eye, Pintle	1
2	J04041	Jackstands	2
3	C29229	Cover, Kick Panel	1
4	B13911	Battery Box	1
5	I04011	Spring Isolator 176#	4
6	C29236	Cover, Engine	1
7	C29012	Cover, Radiator	1
8	D05151	Toolbox Door	2
9	Brake Assembly LH	See Brake Assembly Sheet	2
10	Brake Assembly RH	See Brake Assembly Sheet	2
11	Levelwind	See Levelwind Sheet	1
12	Reel Assembly	See Reel Assembly Sheet	2

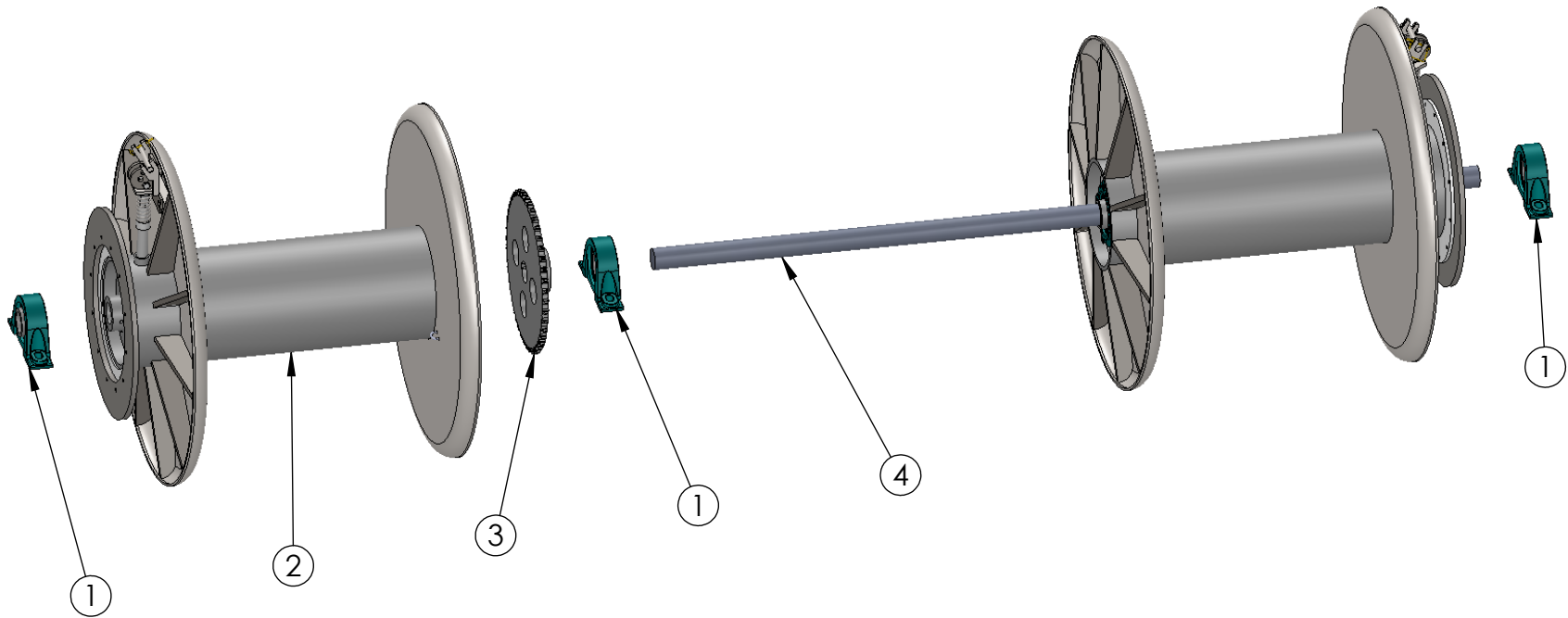


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	J04044	12k Dropleg Jack	1
2	Drive Assembly	See Drive Assembly Sheet	1
3	D05151	Toolbox Door	2
4	Tank Assembly	See Tank Assembly Sheet	1
5	B13106	Box, Electrical	1



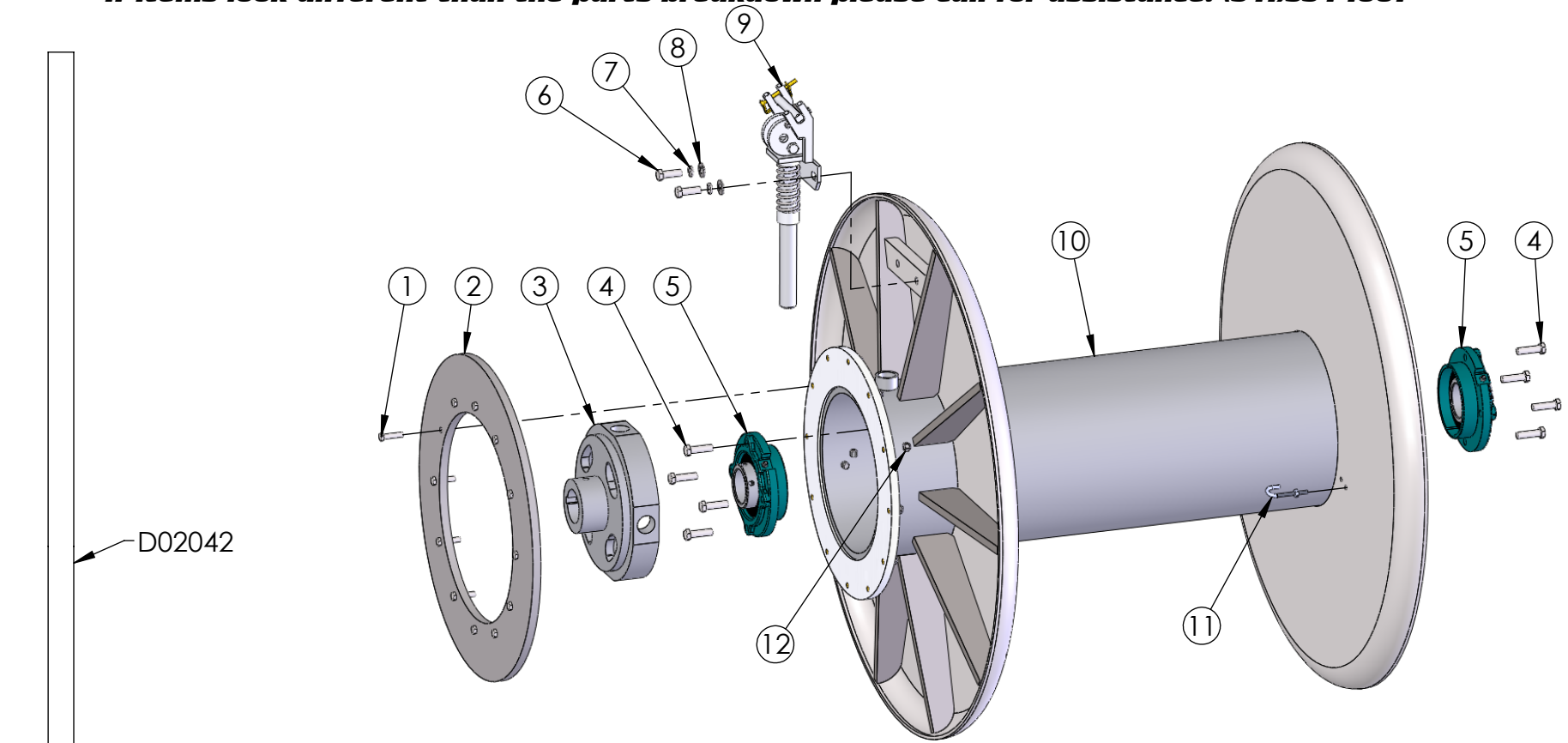
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	F10010	Mud Flap	2
2	Lighting	See Lighting Sheet	1
3	Axle Assembly	See Axle Assembly Sheet	1

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	B07276	Bearing, Pillow Block	3
2	R07007	Reel	2
3	S29031	Sprocket	1
4	S43043	Shaft, 2 1/2" Stress Proof	1

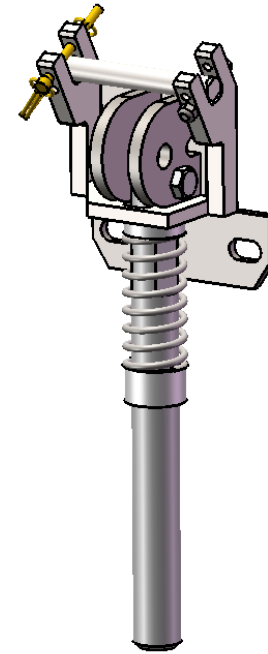
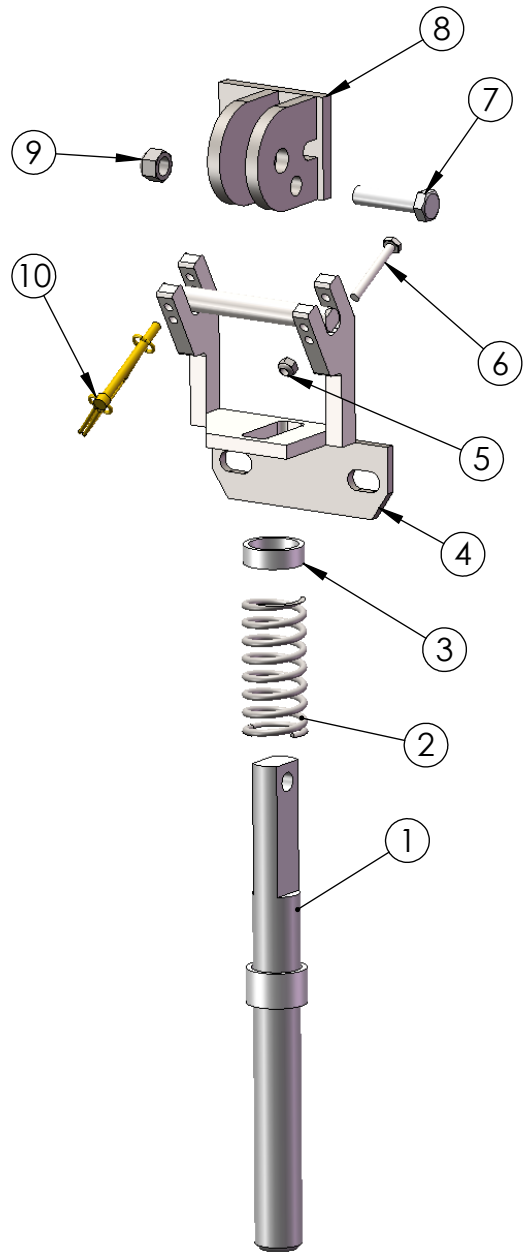
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	B11344	Bolt, Hx Head 3/8"-16 x 1-1/2"	12
2	D02042	Disc, Brake	1
3	H09018	Hub, Locking	1
4	B11364	Bolt, Hx Head 1/2"-13 x 1-3/4"	8
5	B07031	Bearing, 2 1/2" Flange	2
6	B11368	Bolt, Hx Head 1/2"-13 x 1-1/2"	2
7	W01565	Washer, Split Lock 1/2"zinc	2
8	W01005	Washer, Flat SAE 1/2"zinc	2
9	L08032A	Lock, Reel Pin	1
10	R07007	Reel	1
11	H06035	Holder, Rope	1
12	N04545	Nut, Hx Nylock® 3/8"-16	12
13	S04032	Screw, Set 1/2"-13 x 1/2"	2

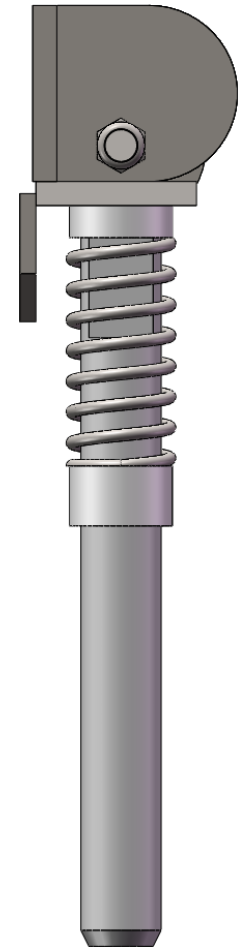
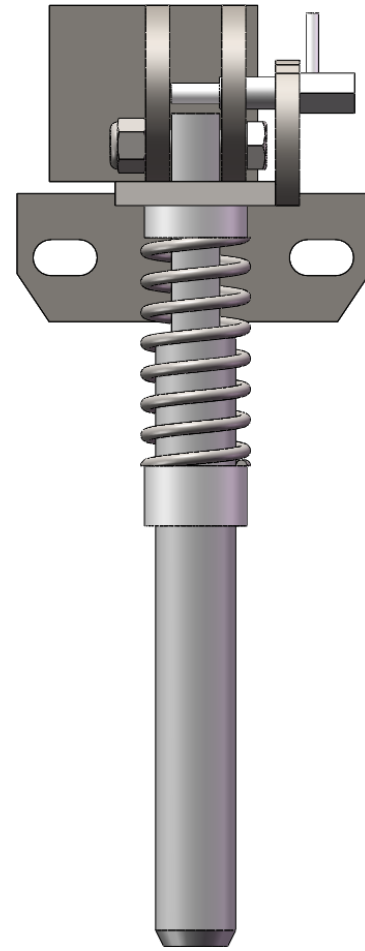
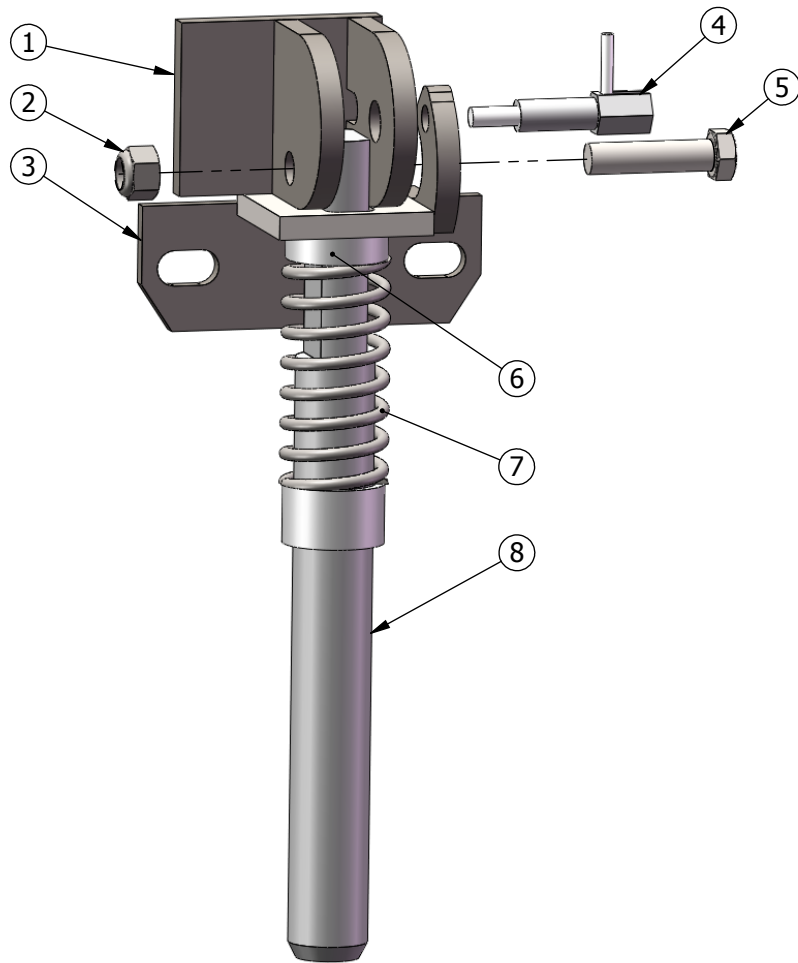


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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	P06071	Pin, Short Cam-Lock	1
2	S28026	Spring, 1-1/4" x 4"	1
3	S24021	Spacer, Reel Locking Pin	1
4	B15126	Bracket, Locking Pin	1
5	N04523	Nut, Hx Nylock® 1/4"-20	1
6	B11008	Bolt, Hx Head 1/4"-20 x 2"	1
7	B11366	Bolt, Hx Head 1/2"-13 x 2"	1
8	H02042	Handle, Cam Assy	1
9	N04555	Nut, Hx Nylock® 1/2"-13	1
10	P06988	Pin, Round Retainer Locking	1

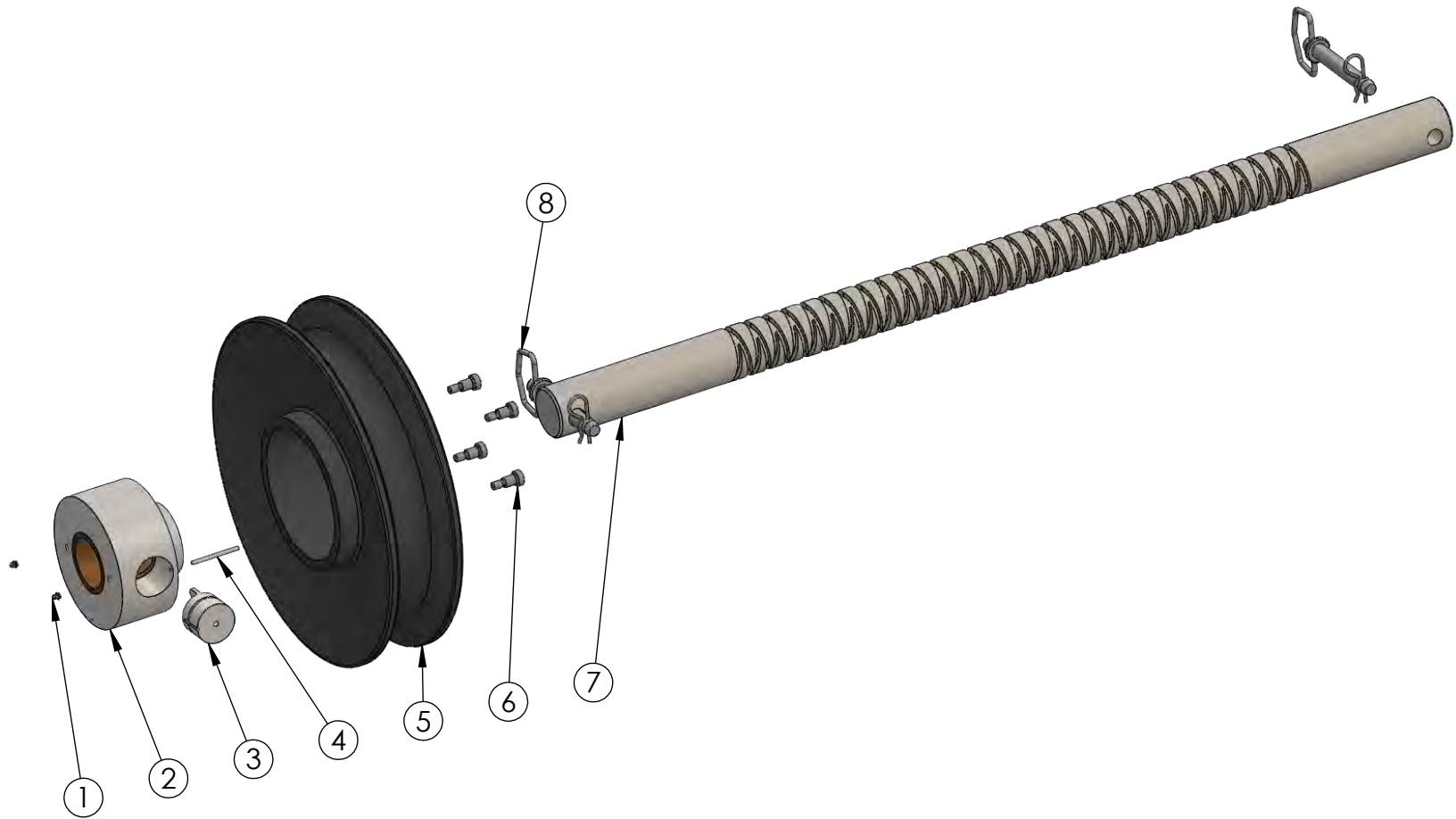
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Retrofit Part #L08032A

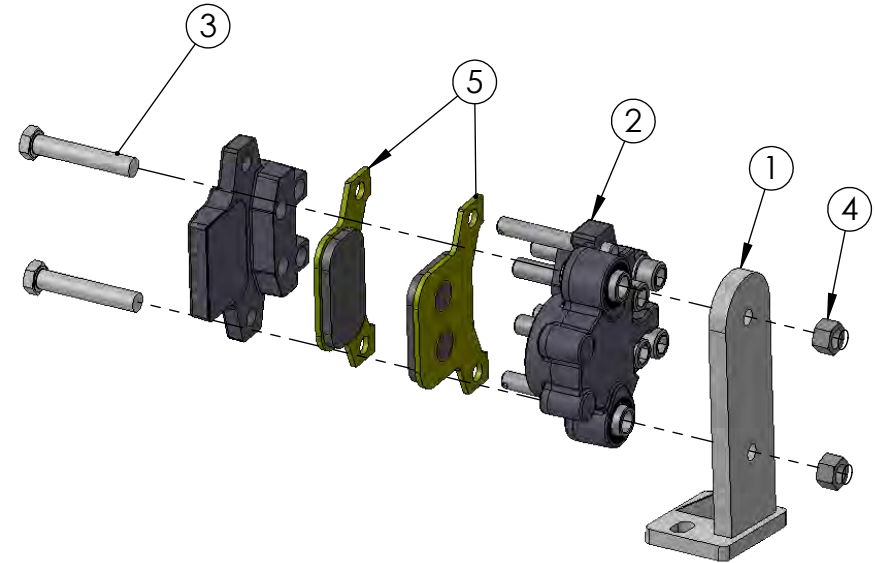
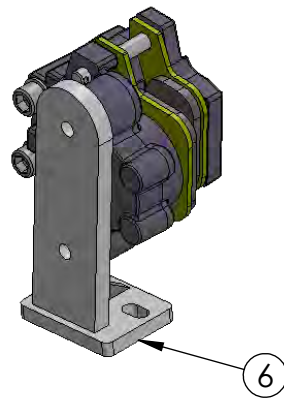
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	H02042	Cam handle assy	1
2	N04555	Nut, Hex Nylock® 1/2"-13	1
3	B15117	Mounting bracket	1
4	L08004	Locking pin	1
5	B11366	Bolt Hx head 1/2-13x2	1
6	S24021	Spacer, Reel Locking pin	1
7	S28026	Spring, 1-1/4 x 4	1
8	P06071	PIN, Short Cam-Lock, ODP 20-4	1

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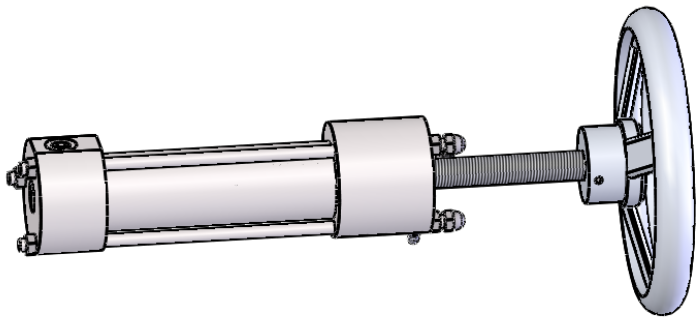
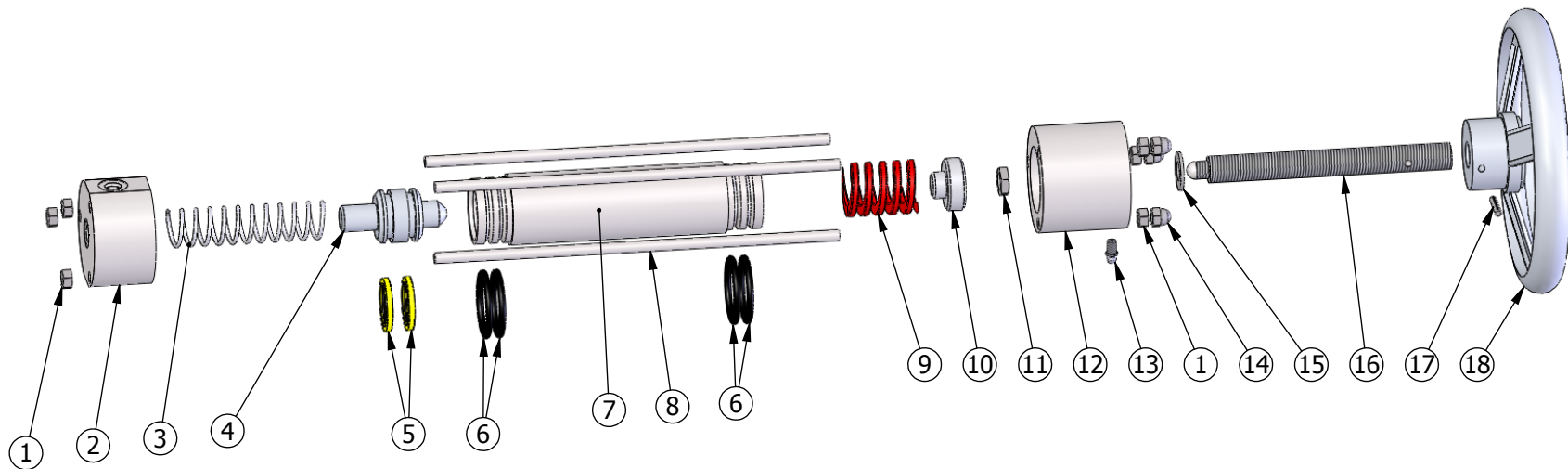
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	F05071	Fitting, Grease Zerk 1/4"-28 tap	2
2	H09020	Hub Assembly	1
3	F12001	Follower	1
4	P06087	Pin, 20-4 LW 3/16" x 2 1/2"	1
5	S10010	15" Nylatron Sheave	1
6	B11161	Bolt, Shoulder 1/2" x 5/8"	4
7	S43300	Levelwind Shaft	1
8	P06096	Pin, with Clip	2

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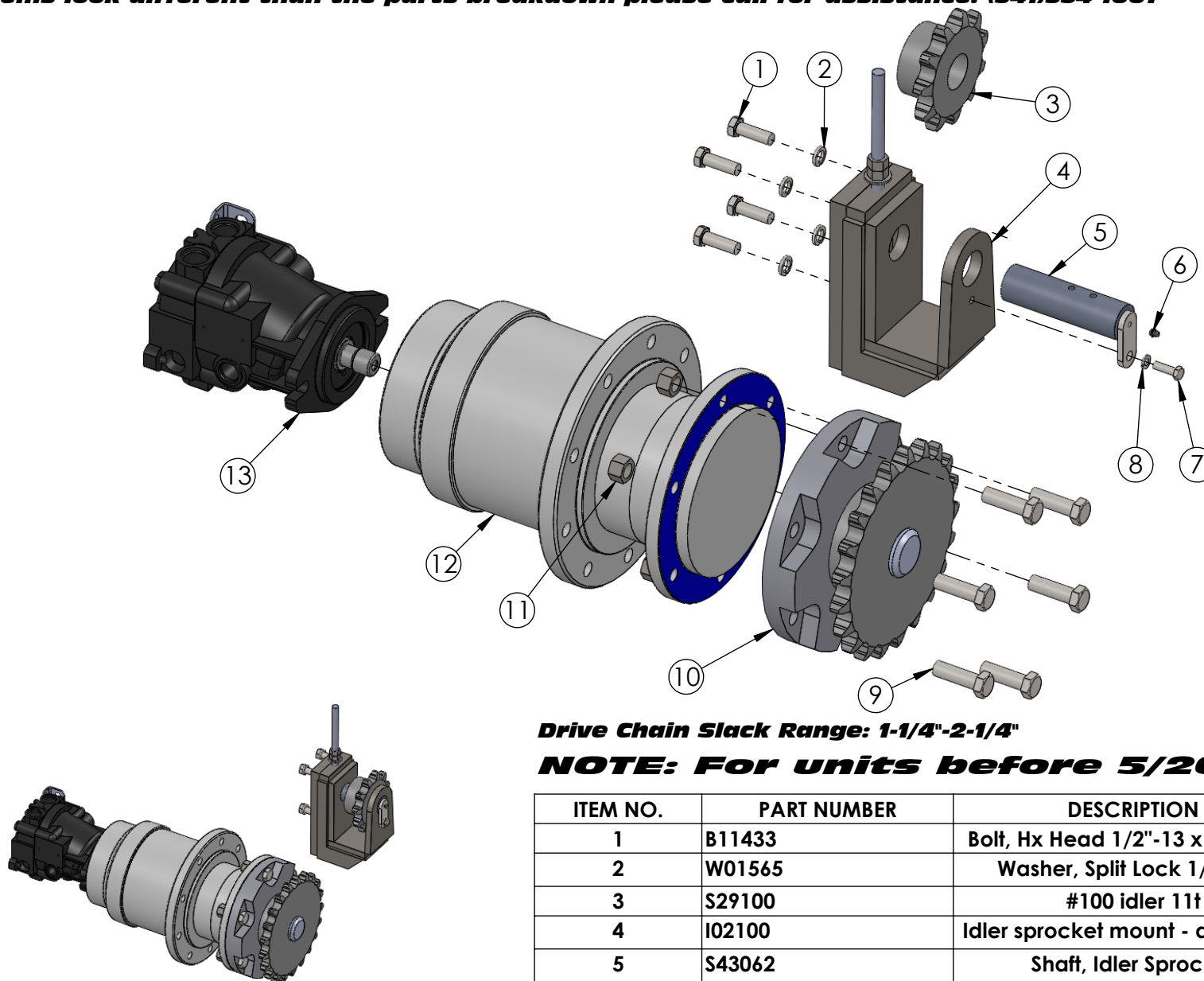
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	B15916	Bracket, Caliper Mount LH	1
2	C04913	Caliper Ausco	1
3	B11484	Bolt, Hx Head 5/8"-11 x 3-1/2" Z8	2
4	N04049	Nut, Hx 5/8"-11	2
5	P01052	Brake Pads (Set of 2)	1
6	B15896	Bracket, Caliper Mount RH	1

If items look different than the parts breakdown please call for assistance. (541)354-1001



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	N04107	Nut Hex 5/16"-18	6
2	C06009	Bar round 3" 1018	1
3	S28022	Return Spring	1
4	P08017	Piston, Aluminum two groove	1
5	O01061	Seal	2
6	O01060	O-Ring	4
7	H08003	Cylinder Tube	1
8	R19007	Bar round 5/16" 1018	3
9	S28021	Spring	1
10	P08016	2" Aluminum RB	1
11	N04039	Nut Hex Jam 1/2-20	1
12	C06012	Bar round 3" 1018	1
13	F05630	Fitting, 1/4"-28 Zerk	1
14	N04103	Nut Hex 5/16"-18 Acorn	3
15	W01005	Washer, Flat SAE 1/2"	1
16	S04006-001	Bar 3/4"-8 acme thread	1
17	P06186	Pin, Roll 3/16 "x 1"	1
18	H02060	Handle, 8" Dia.	1

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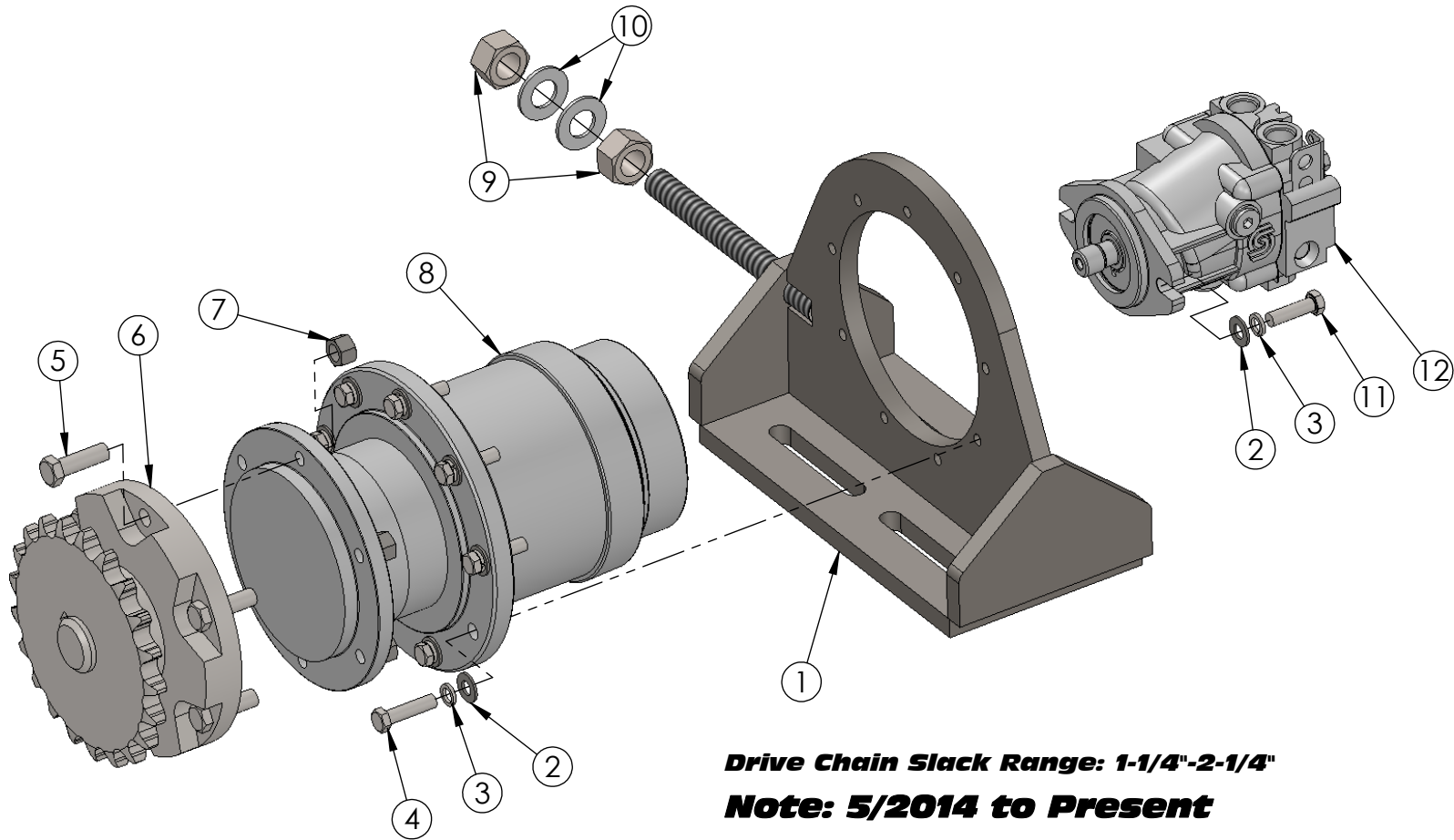


Drive Chain Slack Range: 1-1/4"-2-1/4"

NOTE: For units before 5/2014

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	B11433	Bolt, Hx Head 1/2"-13 x 1-1/2" Z8	4
2	W01565	Washer, Split Lock 1/2"zinc	4
3	S29100	#100 idler 11t	1
4	I02100	Idler sprocket mount - adjustable	1
5	S43062	Shaft, Idler Sprocket	1
6	F05071	Fitting, Grease Zerk 1/4"-28 tap	1
7	B11020	Bolt, Hx Head 5/16"-18 x 1"	1
8	W01048	Washer, Split Lock 5/16"zinc	1
9	B11376	Bolt, Hx Head 5/8"-11 x 2"	6
10	S43042	ODP20-4D RE-DRIVE	1
11	N04049	Nut, Hx 5/8"-11	6
12	G12006	Gear, Planetary	1
13	M08043	Motor, Sauer	1

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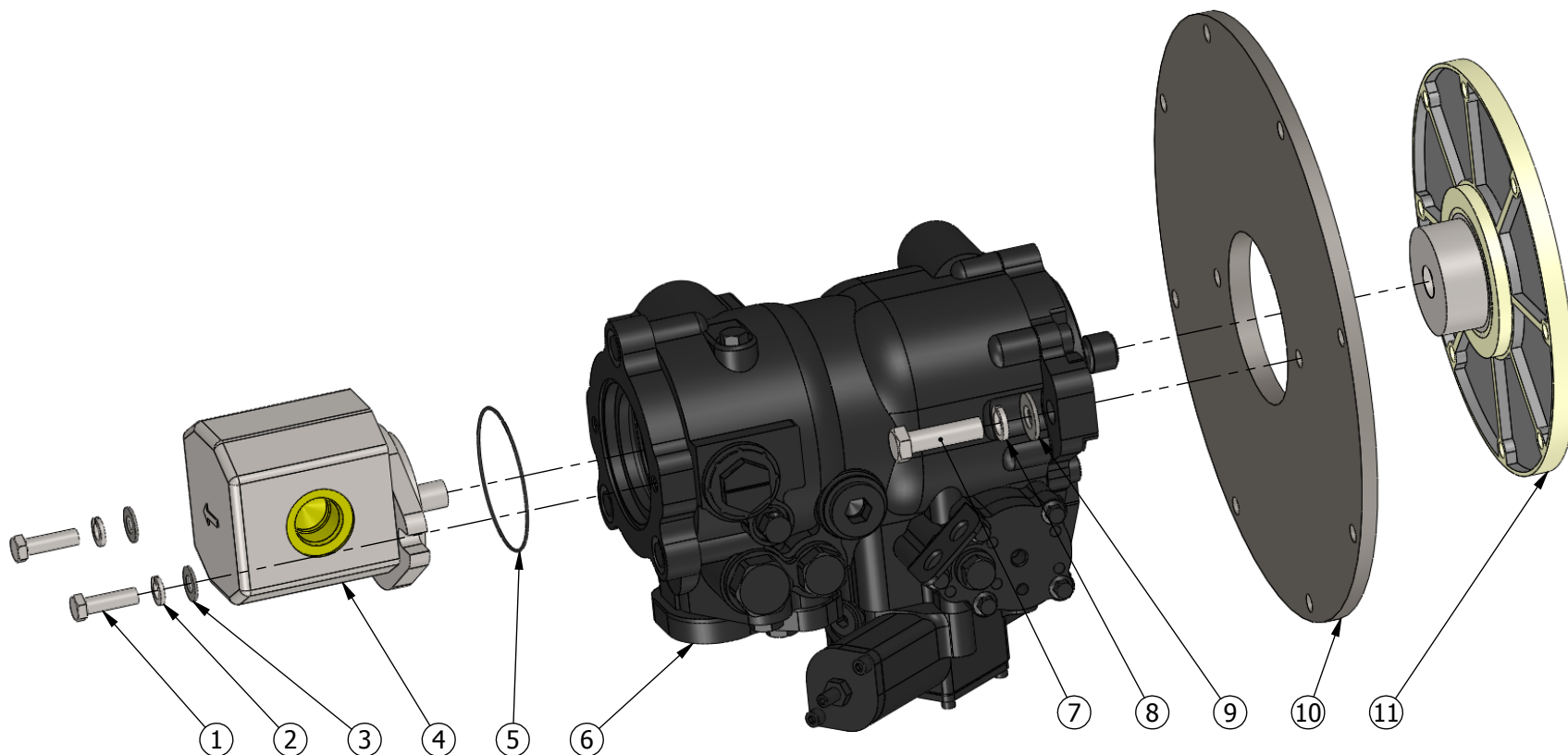


Drive Chain Slack Range: 1-1/4"-2-1/4"

Note: 5/2014 to Present

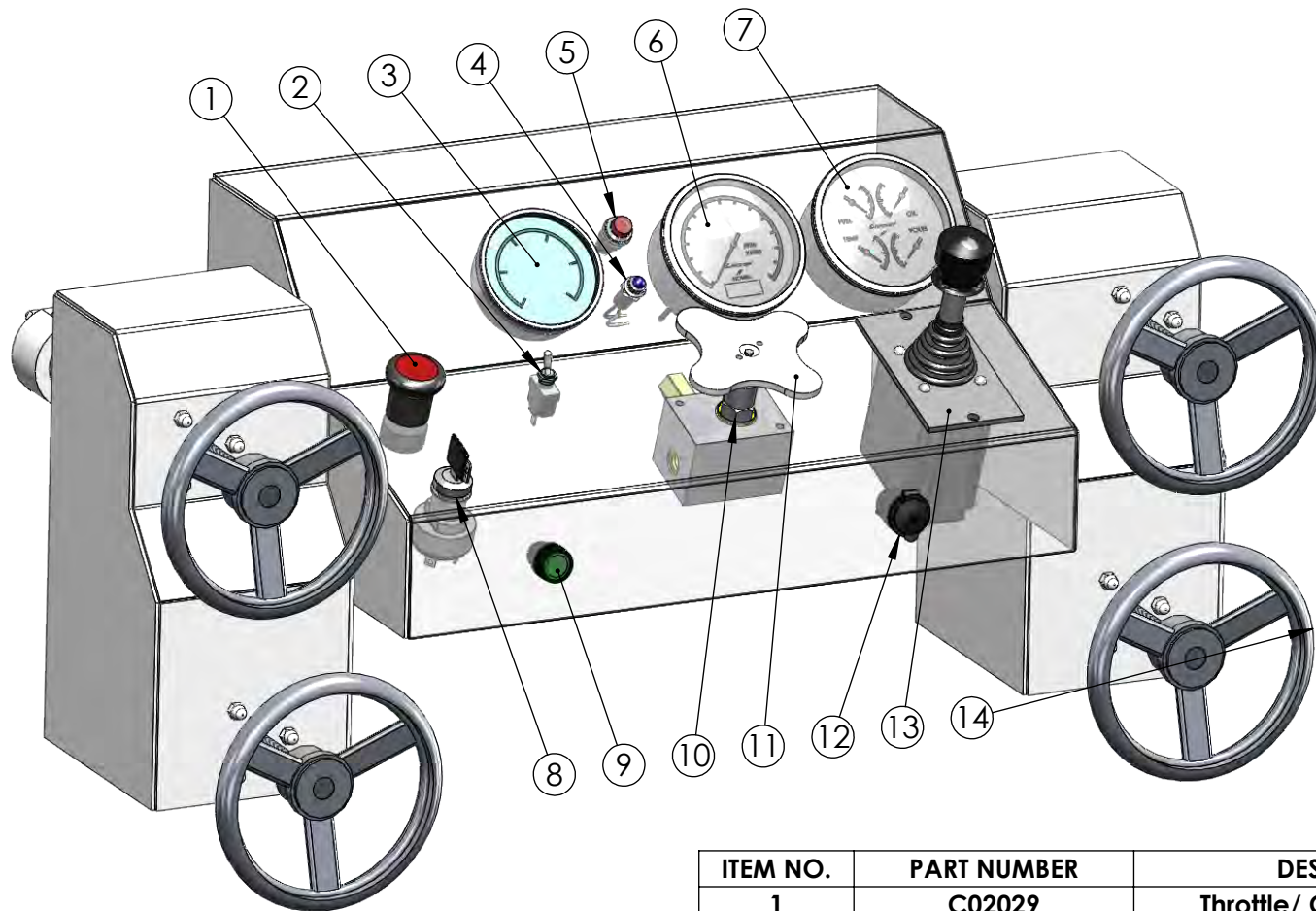
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	M09046	Mount, Planetary	1
2	W01005	Washer, Flat SAE 1/2"zinc	11
3	W01565	Washer, Split Lock 1/2"zinc	11
4	B11446	Bolt, Hx Head 1/2"-13 x 2" Z8	9
5	B11376	Bolt, Hx Head 5/8"-11 x 2"	6
6	S43042	ODP20-4D RE-DRIVE	1
7	N04049	Nut, Hx 5/8"-11	6
8	G12006	Gear, Planetary	1
9	N04267	Nut, 1-8 Z	2
10	W01294	Washer, Flat SAE 1"zinc	2
11	B11445	Bolt, Hx Head 1/2"-13 x 1-3/4" Z8	2
12	M08043	Motor, Sauer	1

If items look different than the parts breakdown please call for assistance. (541)354-1001



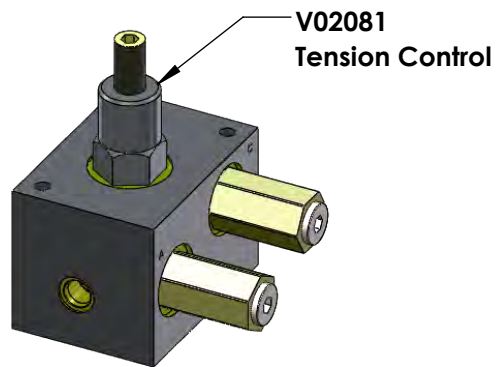
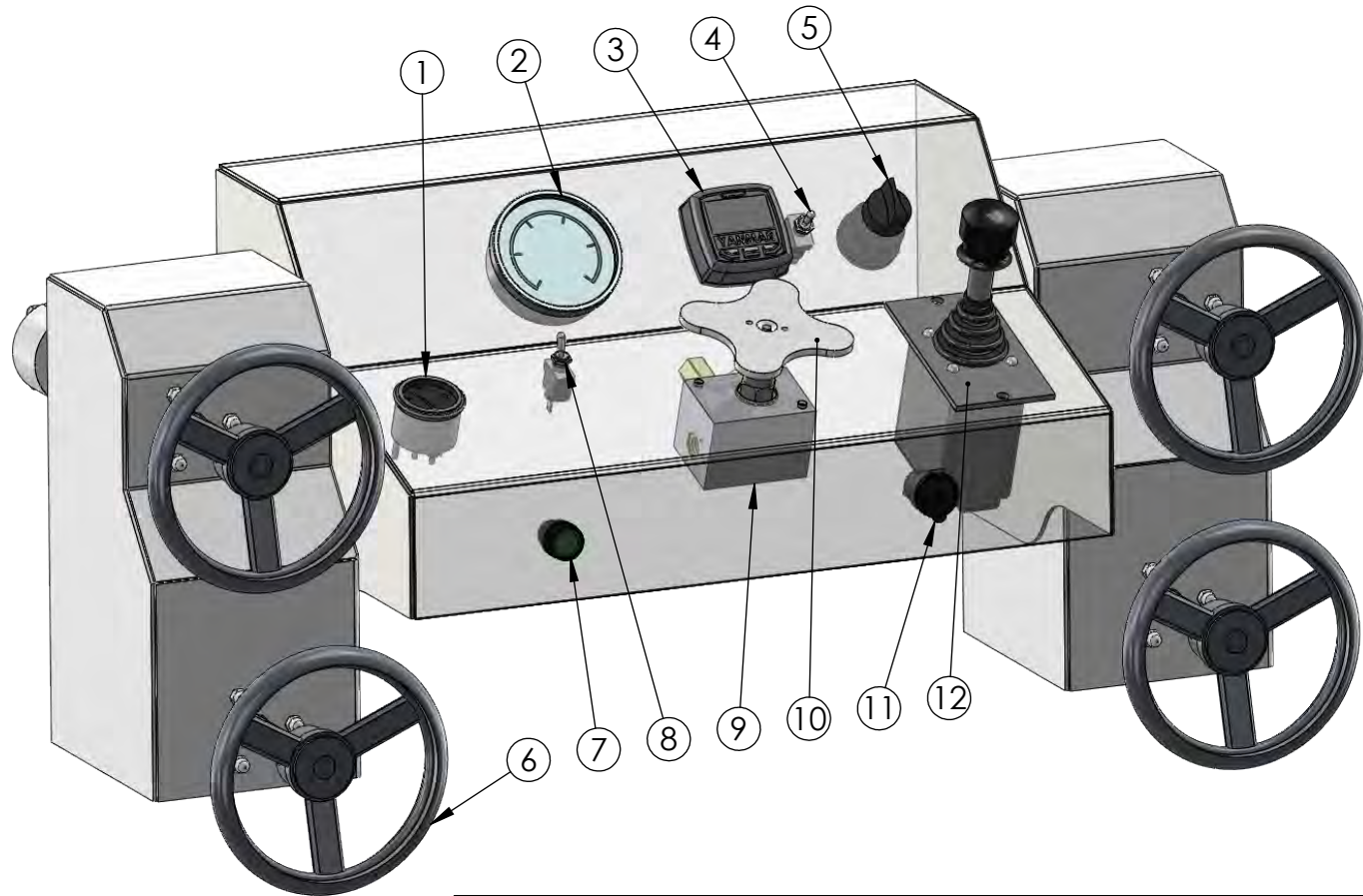
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	B11343	Bolt Hx head 3/8-16x1-1/4	2
2	W01545	Washer, Split Lock 3/8"	2
3	W01002	Washer Flat SAE 3/8	2
4	P20106	Pump, 10gpm	1
5	O01111	O-ring Small Gear Pump	1
6	P20070	Pump, Hydraulic	1
7	B11364	Bolt Hx head 1/2-13x1-3/4	2
8	W01565	Washer, Split Lock 1/2"	2
9	W01005	Washer Flat SAE 1/2"	2
10	P09097	Pump Adapter Plate	1
11	C28026	Pump Coupler/ Flywheel	1

If items look different than the parts breakdown please call for assistance. (541)354-1001

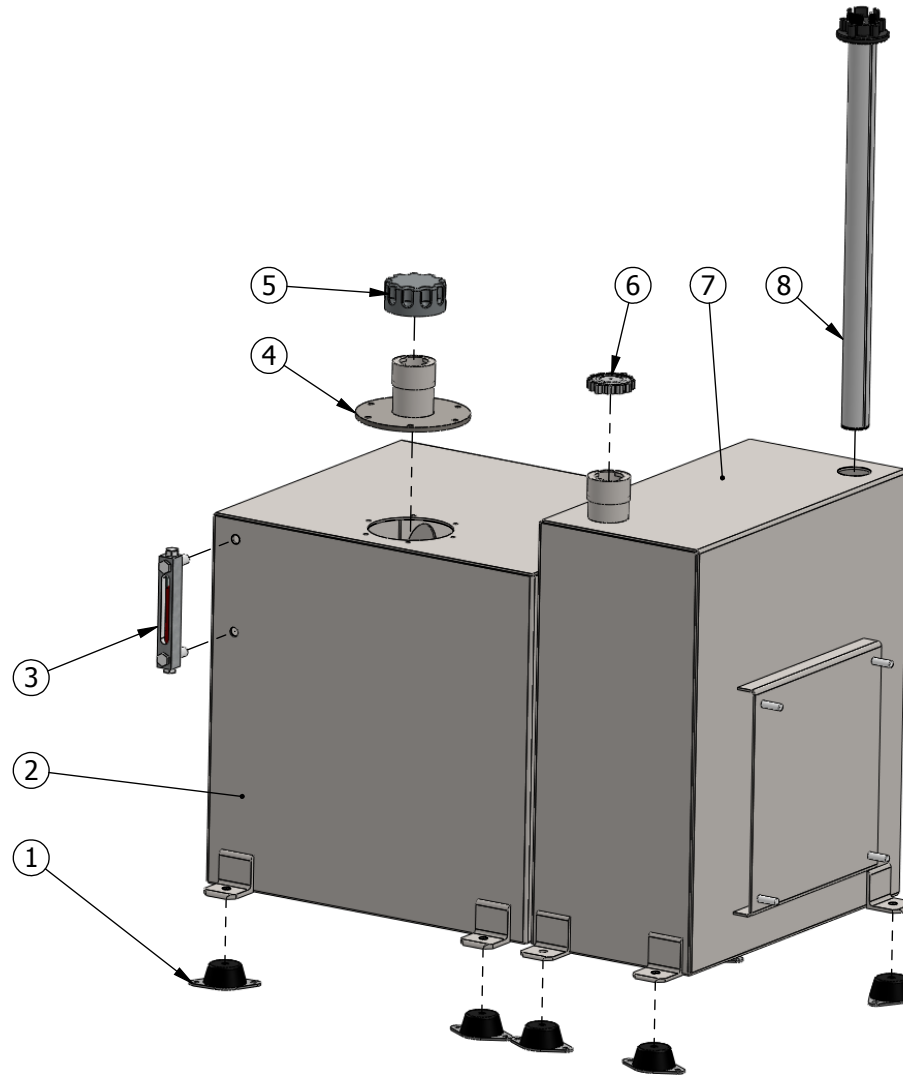


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	C02029	Throttle/ Cable Assembly	1
2	S40035	Switch, SP/ST Toggle	1
3	G02007	Gauge, 4" 600PSI	1
4	L04200	PreHeat Light	1
5	L04025	Light, Pilot	1
6	G02022	Livorsi Tachometer	1
7	G02033	Gauge, Livorsi 4 in 1	1
8	S41100	Switch Ignition JDD	1
9	S40169	Switch, Payout Lock-Out	1
10	M04061	Manifold Tension Control	1
11	H02063	Handle CP210 relief	1
12	R12005	12v Socket	1
13	C34031	Joystick Controller	1
14	C32004	Brake Cylinder	4

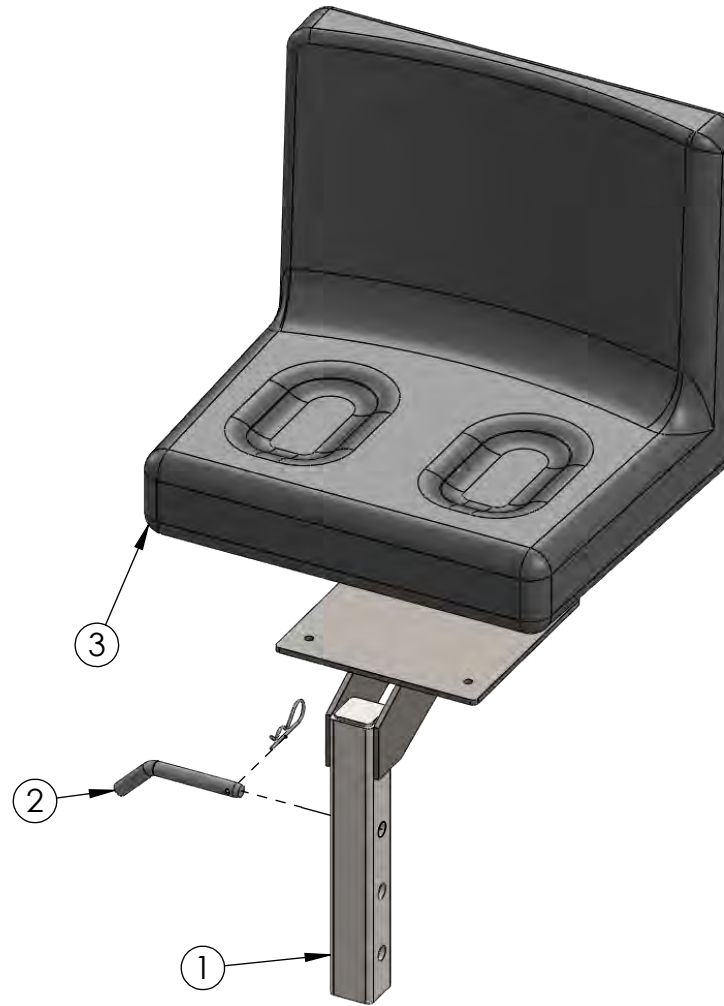
If items look different than the parts breakdown please call for assistance. (541)354-1001



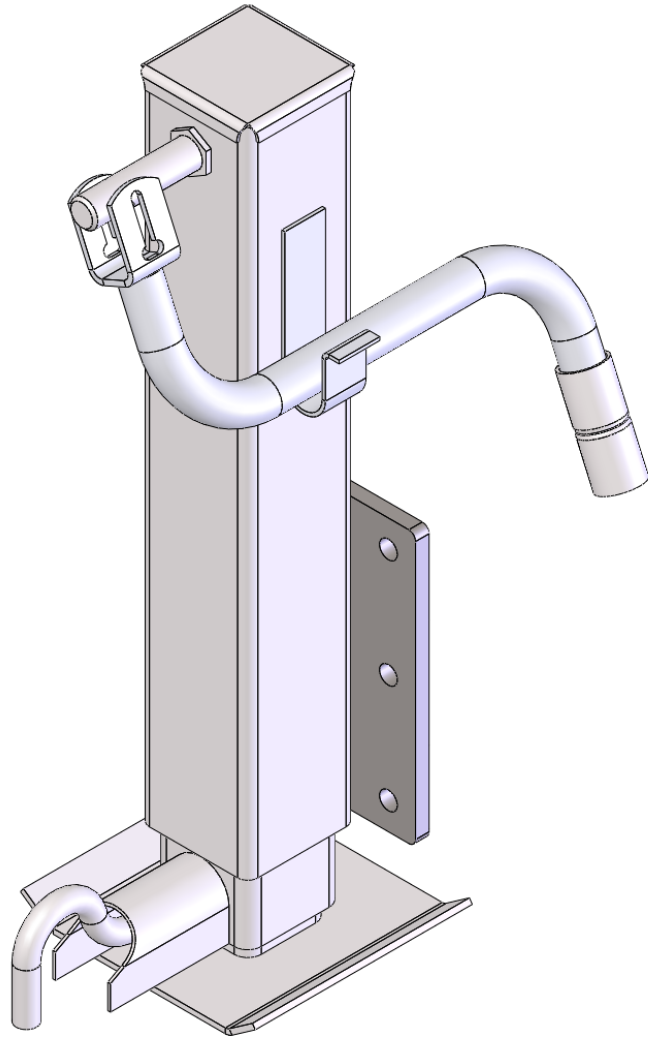
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	G02005	Gauge, Fuel Level	1
2	G02007	Gauge, 4" 600PSI	1
3	K02707	Display, Yanmar T4 w/ Keyswitch	1
4	S40100	Switch, SP/DT Momentary	1
5	S40070	Switch, Key Cole Hersee	1
6	C32004	Brake Cylinder	4
7	S40169	Switch, Payout Lock-Out	1
8	S40035	Switch, SP/ST Toggle	1
9	M04061	Manifold Tension Control	1
10	H02063	Handle CP210 relief	1
11	R12005	12v Socket	1
12	C34031	Joystick Controller	1



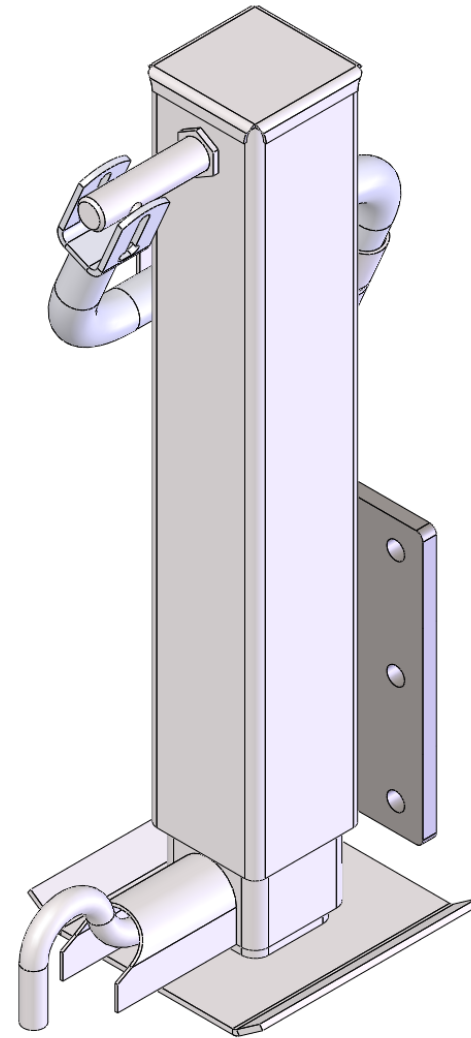
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	I04003	Insulator, Small	8
2	T01100	Tank, Hydraulic 31 gallon	1
3	G02046	Gauge, Hyd oil level	1
4	N07002	Neck, Hydraulic fill	1
5	C06155A	Cap, Hydraulic	1
6	C06205	Cap, Fuel	1
7	T01102	Tank, Fuel 19 gallon	1
8	S46006	Fuel Sender	1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	P14053	Post, Offset Seat Mount	1
2	P06999	Pin, Bent Hitch 5/8 x 3"	1
3	S03040	Seat, Operator JD	1

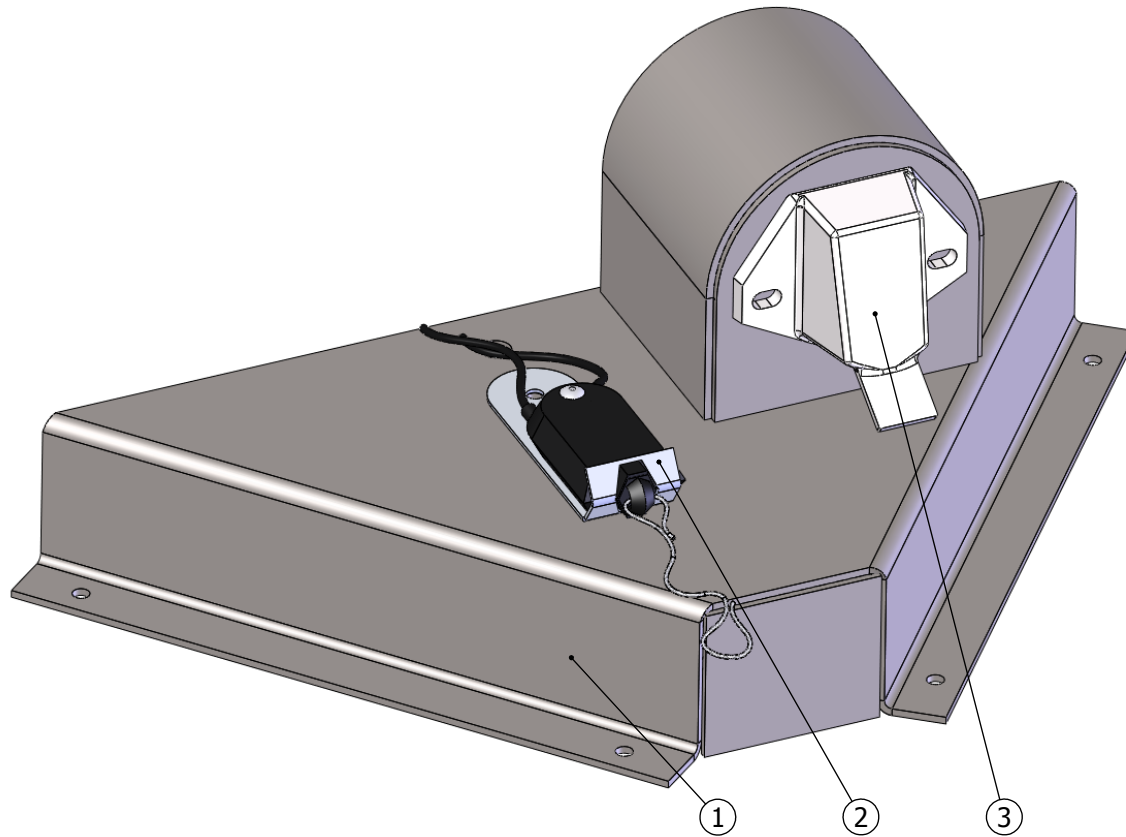


**J04041
REAR STREETSIDE/FRONT
JACKSTAND**



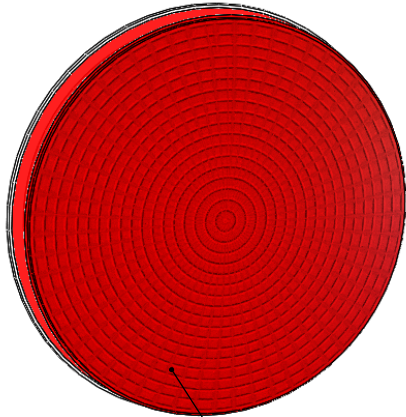
**J04044
REAR CURBSIDE
JACKSTAND**

If items look different than the parts breakdown please call for assistance. (541)354-1001

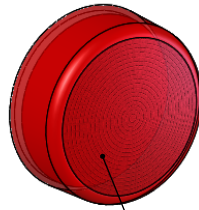


ITEM NO.	PART NUMBER	DESCRIPTION	Default/QTY.
1	H05002	Hood, Electrical	1
2	S40003	Tekonsha Break-away switch	1
3	S21035	Socket 7-wire Pollak	1

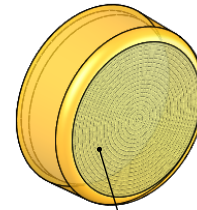
If items look different than the parts breakdown please call for assistance. (541)354-1001



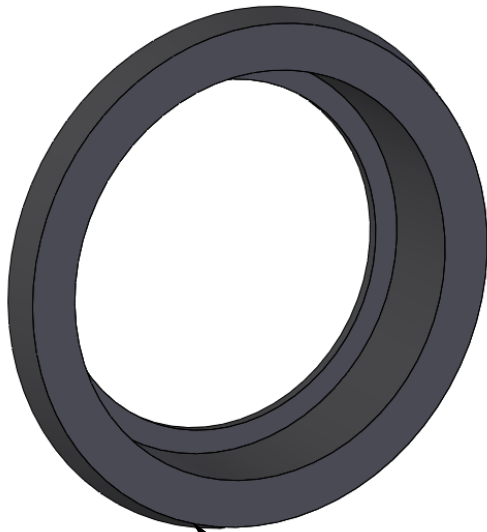
**L04030
Light, 4" Tail Stop Turn**



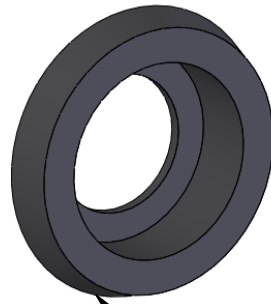
**L04070
Light, 2" Red**



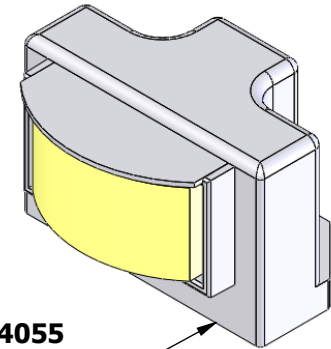
**L04035
Light, 2" Amber**



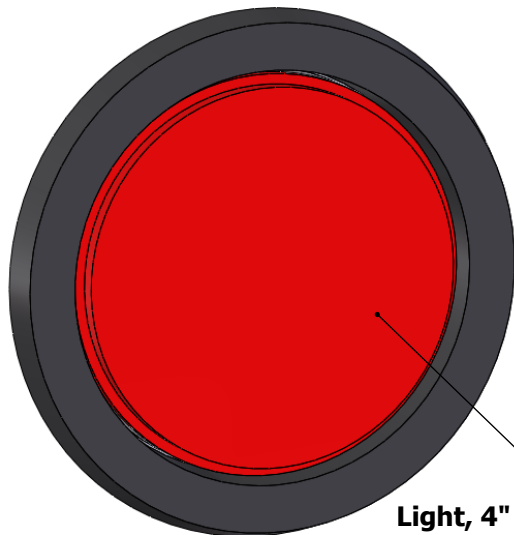
**G08010
Grommet, 4" Tail/Stop/Turn**



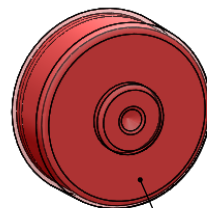
**G08005
Grommet 2" Light**



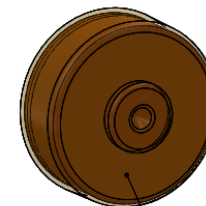
**L04055
Light, License plate**



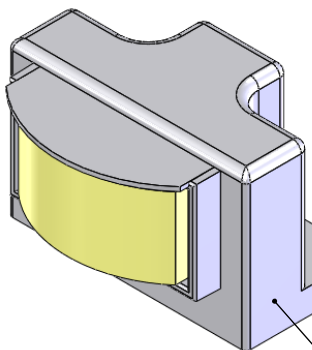
L04032
Light, 4" Tail/Stop/Turn Kit LED



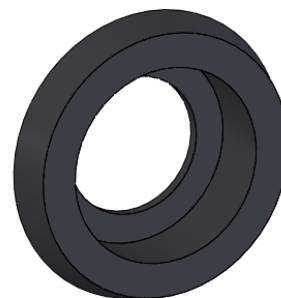
L04310
Light Red 2" LED



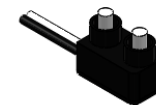
L04311
Light Amber 2" LED



L04055
Light, License plate

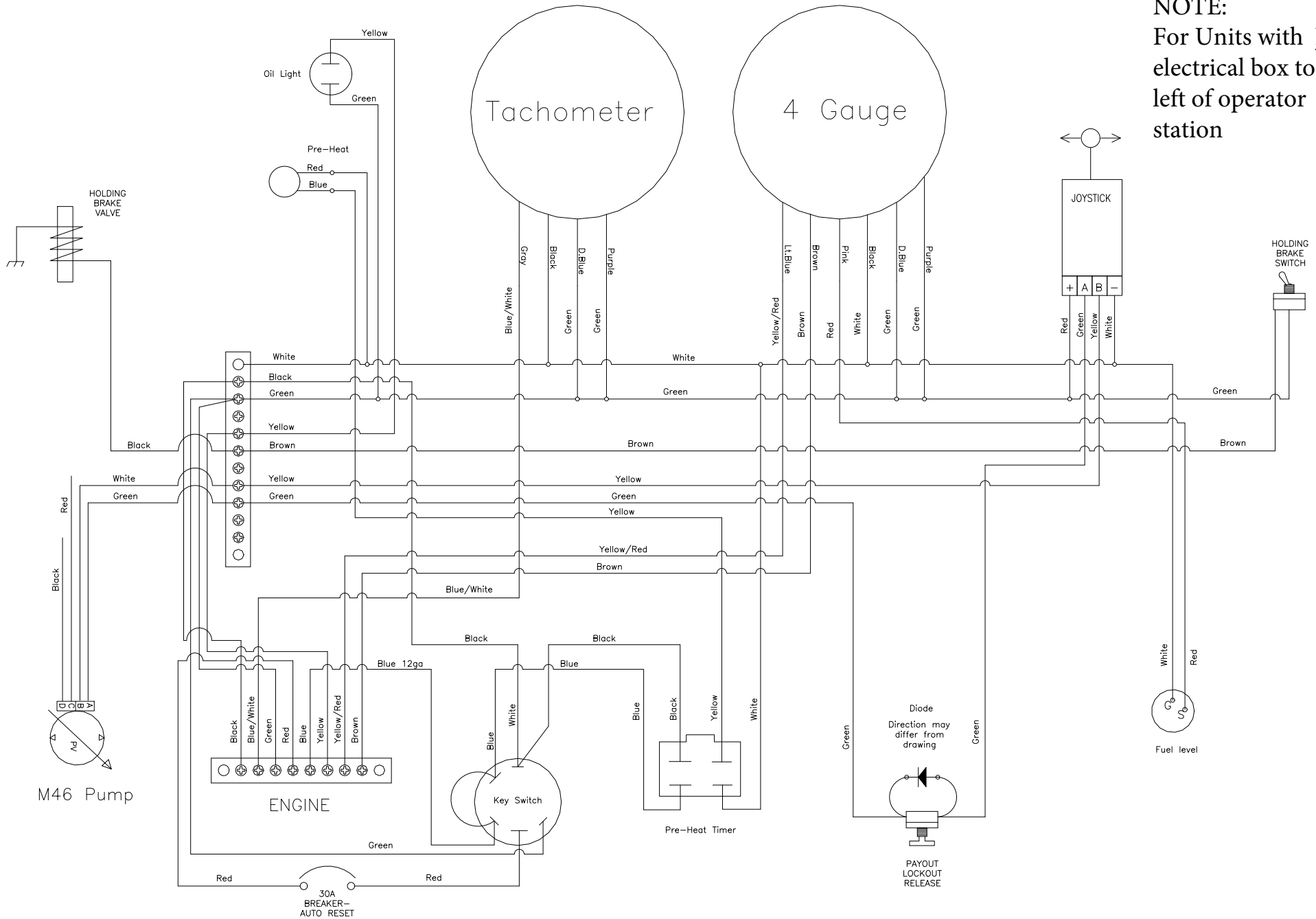


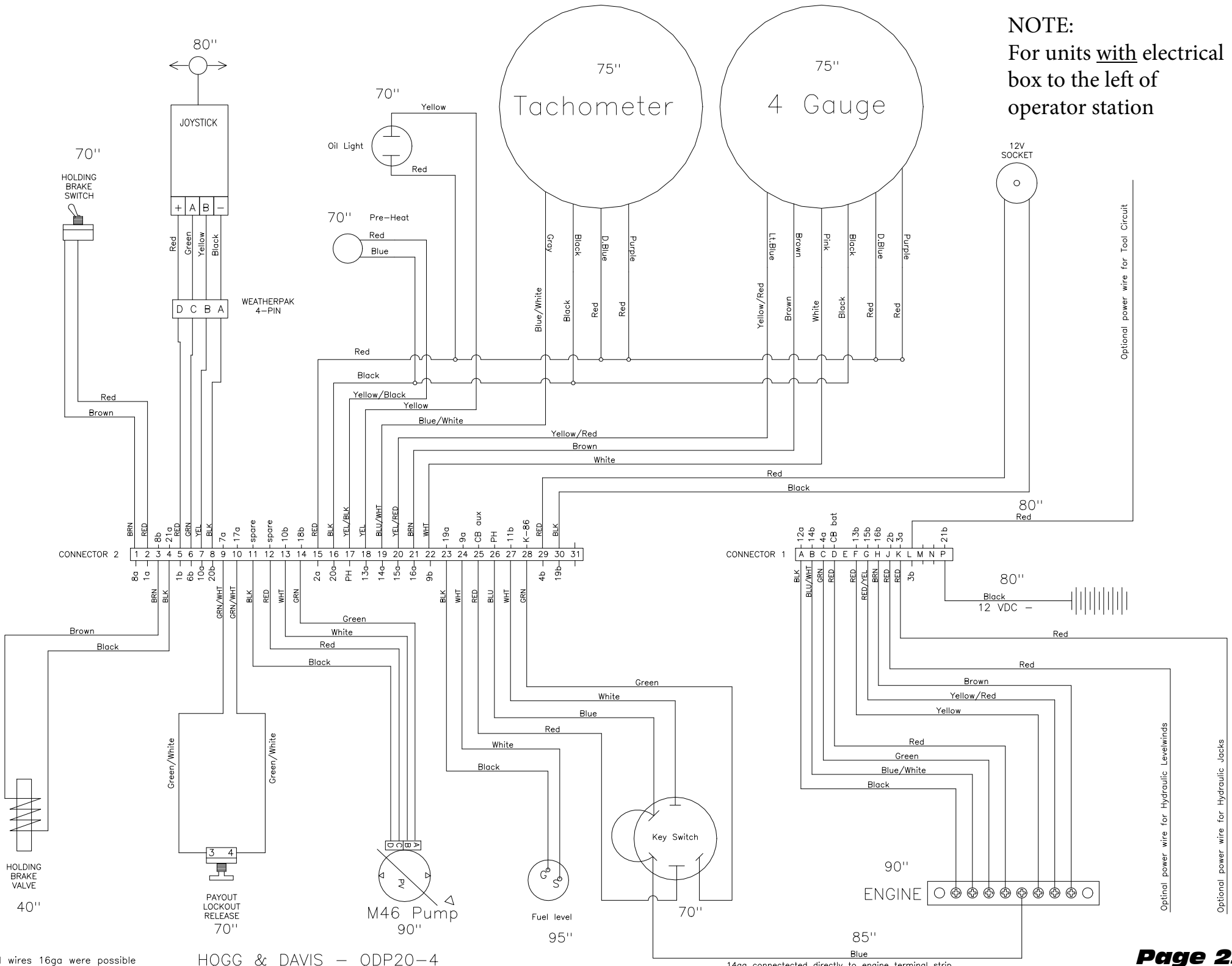
G08005
Grommet 2" Light



P05025
Pigtail 2 wire

NOTE:
For Units with No
electrical box to the
left of operator
station





NOTE:
 For units with electrical
 box to the left of
 operator station

Optional power wire for Tool Circuit

Optional power wire for Hydraulic Levelwinds

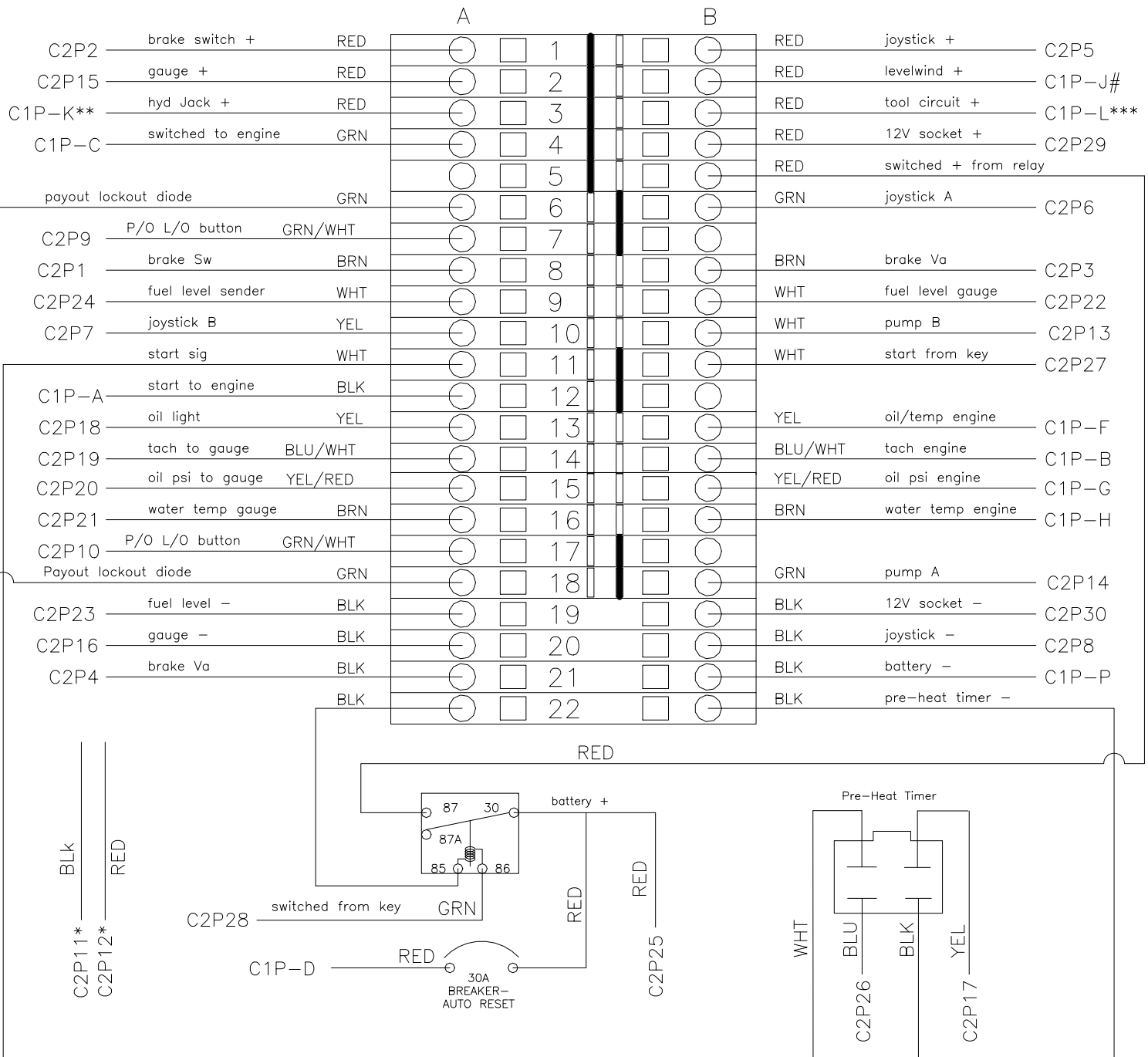
Optional power wire for Hydraulic Jacks

all wires 16ga were possible

14ga connected directly to engine terminal strip

NOTE:
For units with electrical
box to the left of
operator station

diode - direction may differ from drawing

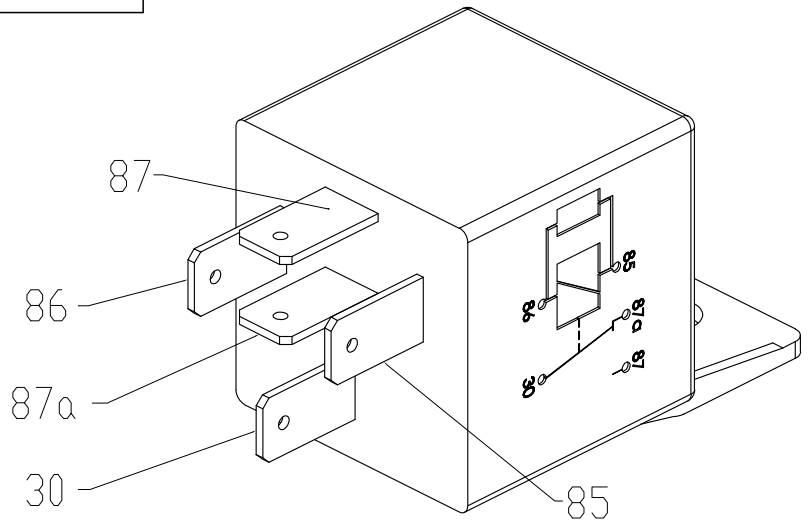
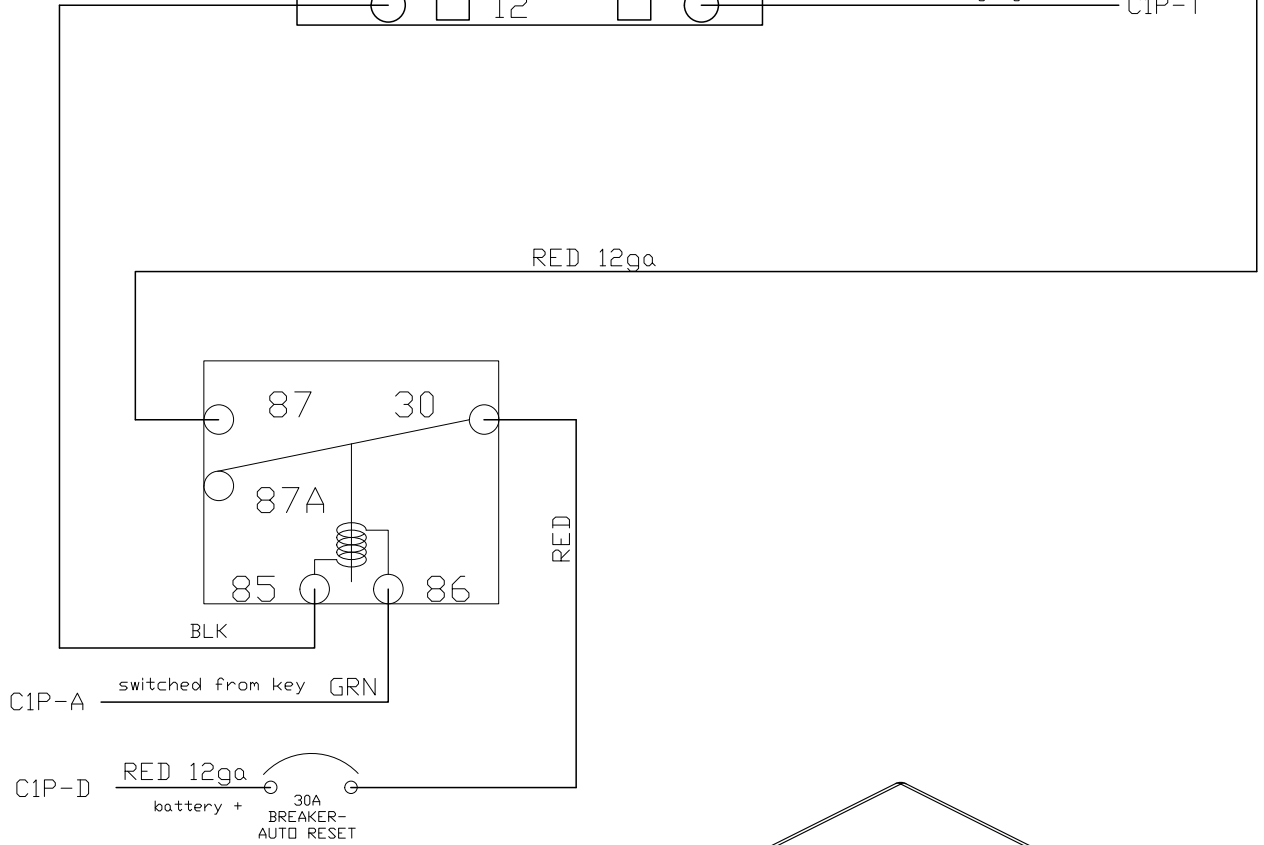
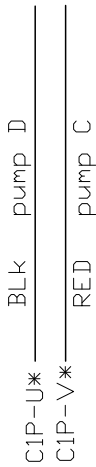
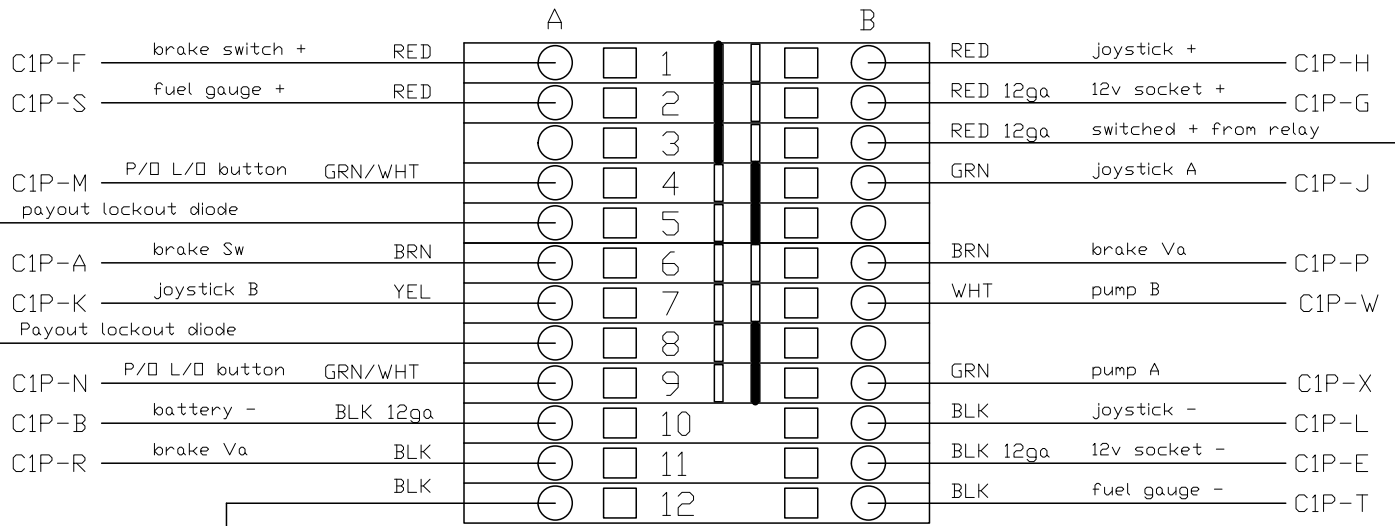


* 2nd coil from M46 pump
** Pin is OPTINAL power wire for HYDRAULIC OUTRIGGERS
*** Pins are for OPTIONAL TOOL CIRCUIT

Pins for OPTINAL LEVELWIND
C1P-D is BATTERY (+)
C1P-P is BATTERY (-)

HOGG & DAVIS - ODP20-4 TERMINAL LAYOUT

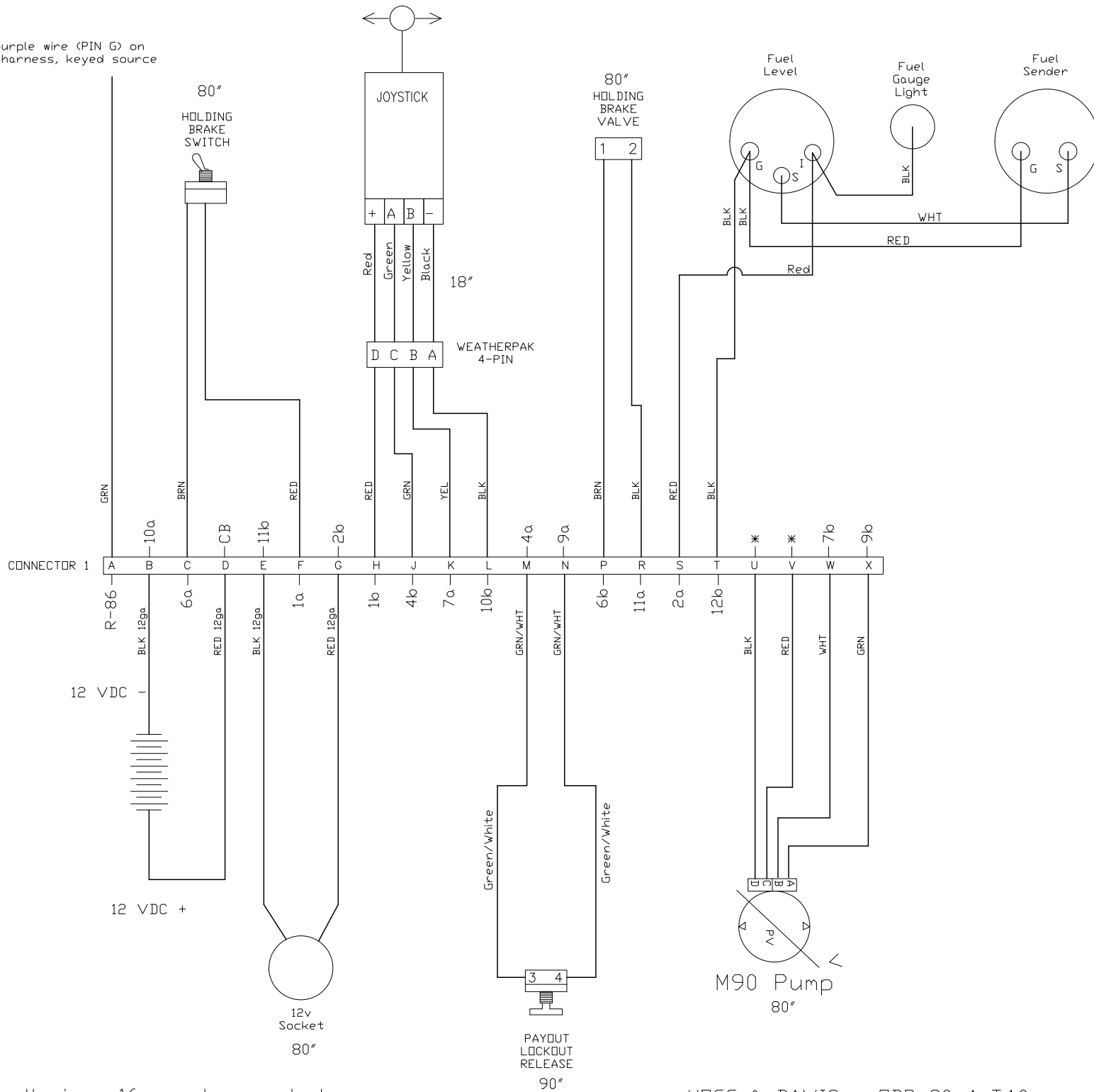
diode - direction may differ from drawing



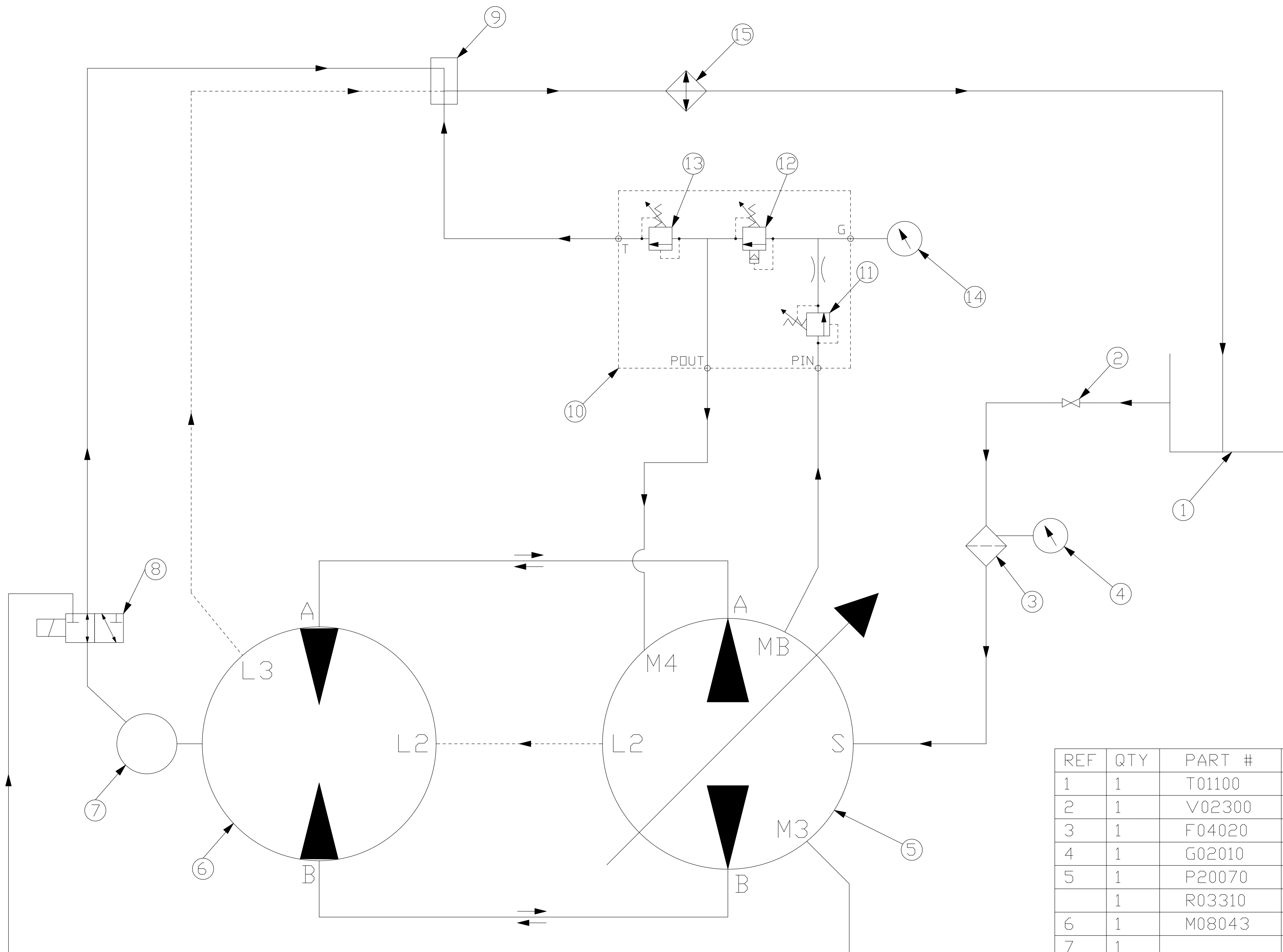
* 2nd coil from M90 pump
 note: all wires 16ga unless noted

C1P-D is BATTERY (+)
 C1P-B is BATTERY (-)

Splice purple wire (PIN G) on display harness, keyed source



note: all wires 16ga unless noted



REF	QTY	PART #	DESCRIPTION
1	1	T01100	Tank, Hydraulic
2	1	V02300	Valve, Ball 1-1/4
3	1	F04020	Filter, Spin-on 10 Micron
4	1	G02010	Gauge, Suction
5	1	P20070	Pump Sundstrand
	1	R03310	Relief, 2755 PSI
6	1	M08043	Motor, Sauer Danfoss
7	1		Planetary Brake
8	1	V02006	Valve, Two Posiiton
9	1	M04010	Return Manifold
10	1	M04061	Manifold, Pressure Limiting
11	1		Relief, LOW PSI
12	1		Relief, TENSION
13	1		Relief, HIGH PSI
14	1	G02076	Gauge, 5K PSI
15	1	C35010	Cooler, Hydrulic Oil



HOGG & DAVIS
 PO BOX 405, 3800 EAGLE LOOP
 ODELL, OR 97044 (541) 354-1001

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DRAWN
 NAME sm
 DATE 10/21/2011
 SHEET 1 OF 1

TITLE: Hydraulic Schematic
 Part #: ODP20-4



ODP20-4 - Specifications

Performance

Continuous torque rating of 36,000 in-lbs, intermittent of 40,000 in-lbs.
Continuous line pull of 2,000 lbs at full reel.
0 ~ 4.0 mph line speed with infinite speed and inching control.
3,500 PSI maximum hydraulic pressure at full performance.

Reel

Four pulling reels with individual mechanical engagement at each reel.
Reel is 40" diameter, 29.3" between flanges with a 12-3/4" core.
Capacity of reel: standard 10,000ft of 7/16"
Will hold 9,000 ft per reel of 1/2" inch or 17,000 ft per reel of 3/8" rope
Individual Stainless Steel overspin brakes with hydraulic calipers.
Reel shaft mounted on pillow block and flange bearings.
Automatic diamond lead screw for individual use with all reels.

Hydraulic Reel Drive

Drive system with spring applied hydraulic release holding brake rated at 150% of rated machine torque.
Braking system applies automatically in event of pressure loss.
Manual holding brake control.
Variable displacement hydraulic pump with electric variable speed control.
Hydraulic oil cooler.
30 gallon hydraulic reservoir with oil level gauge.

Engine

Yanmar 3TNV88 30 hp water cooled diesel, Tier 4 Compliant.
19 gallon fuel tank with gauge.
Lockable steel battery box.
Direct Mount hydraulic pump drive.
Engine Hour meter.

Control Console

The elevated control console is positioned in the center of the trailer tongue to provide optimum visibility and safety.

Laser Engraved operators panel with Rowmark Lasermax to a depth of .003 inches.

Hydraulic pressure gauge and Nominal line pull chart for line pull estimation.

Spring return to neutral control joystick for take up and pay out functions.

Livorsi Marine gauges with four gauge cluster and tachometer with hour meter.

Pay out lockout switch to prevent unintentional payout of rope or conductor.

Adjustable line-pull pressure control.

Operator's protection screen.

Operator's seat.

Trailer and undercarriage

Length:	17'
Width	96"
Height	99"
Weight	9,100 lbs
Tongue weight	950 lbs

Single axle with 10,000 lb capacity, spring leaf type with 12V electric brakes and breakaway switch

Break away chains ½" X 36" with hooks and premier #9 weldments

Tires meeting or exceeding the GAWR of unit

Lighting system in accordance with FMVSS 108

Conspicuity System in accordance with FMVSS 108

Heavy Duty crank style tongue and rear trailer jacks

Frame is constructed of tubular steel, fully welded and gusseted

Heavy duty gauge fenders with mud flaps

Unit painted prior to assembly.

Blast with steel grit GM50, primed, baked, painted with two finish coats and cured for 2 hours at 140°F.

Paint is Sherwin Williams Genesis II

Rope

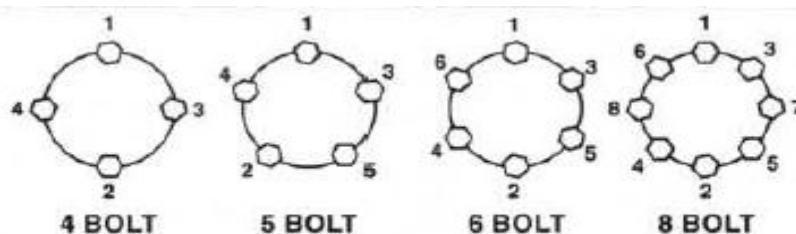
Designed to contain 10,000 feet of 7/16" Rope. Four different colors. Average breaking strength of 9,000 lbs (purchased separately)

Wheel Torque Requirements

Be sure to use only the fasteners matched to the cone angle of your wheel (usually 60° or 90°). The proper procedure for attaching your wheels is as follows:

1. Start all bolts or nuts by hand to prevent cross threading.
2. Tighten bolts or nuts in the sequence shown for wheel torque requirements.
3. The tightening of the fasteners should be done in stages. Following the recommended sequence, tighten fasteners as shown in the chart below.
4. Wheel nuts/bolts should be torqued before first road use and after each wheel removal. Check and re-torque after the first 10 miles, 25 miles and again at 50 miles. Check periodically thereafter.

Wheel Size	1st Stage	2nd Stage	3rd Stage
12"	20-25	35-40	50-75
13"	20-25	35-40	50-75
14"	20-25	50-60	90-120
15"	20-25	50-60	90-120
16"	20-25	50-60	90-120
16.5" x 6.75"	20-25	50-60	90-120
16.5" x 9.75"	55-60	120-125	175-225
14.5" Demount	Tighten Sequentially to		85-95
17.5" Hub Pilot Clamp Ring & Cone Nuts	50-60	100-120	190-210
17.5" Hub Pilot 5/8" Flange Nuts	50-60	90-200	275-325



Maximum Wheel Fastener Torque

The wheel mounting studs used on Dexter Axles conforms to the SAE standards for grade 8. The maximum torque level that can be safely applied to these studs is listed in the following chart:

Stud Size	Max. Torque
1/2"-20 UNF, class 2A	120 lb ft.
9/16"-18, class 2A	170 lb ft.
5/8"-18, class 2A	325 lb ft.

CAUTION

Exceeding the above listed torque limits can damage studs and/or nuts and lead to eventual fractures and dangerous wheel separation.

Decal Kit # K40012



D30001
(1)

HOGG & DAVIS, INC
www.hoggdavis.com

D30018
(1)



D30009
(1)



D30010
(3)



D30015
(5)



D30067
(2)



D30059
(2)



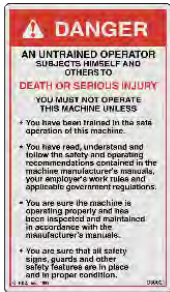
D30042
(11)



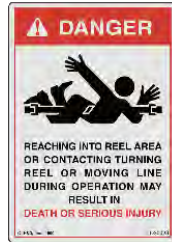
D30034
(3)



D30022
(1)



D30021
(1)



D30028
(4)



D30036
(4)



D30026
(3)



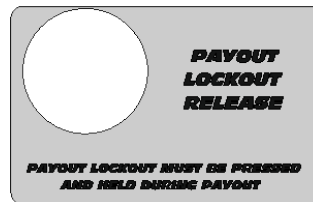
D30127
(3)



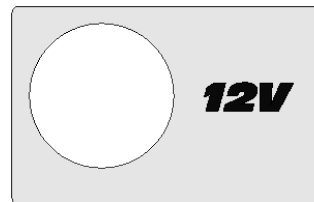
D30069
(2)



D30081
(4)



D30068
(1)



D30083
(1)



D30062
(1)



D30063
(1)



D30064
(1)



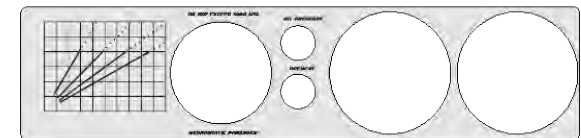
D30065
(1)



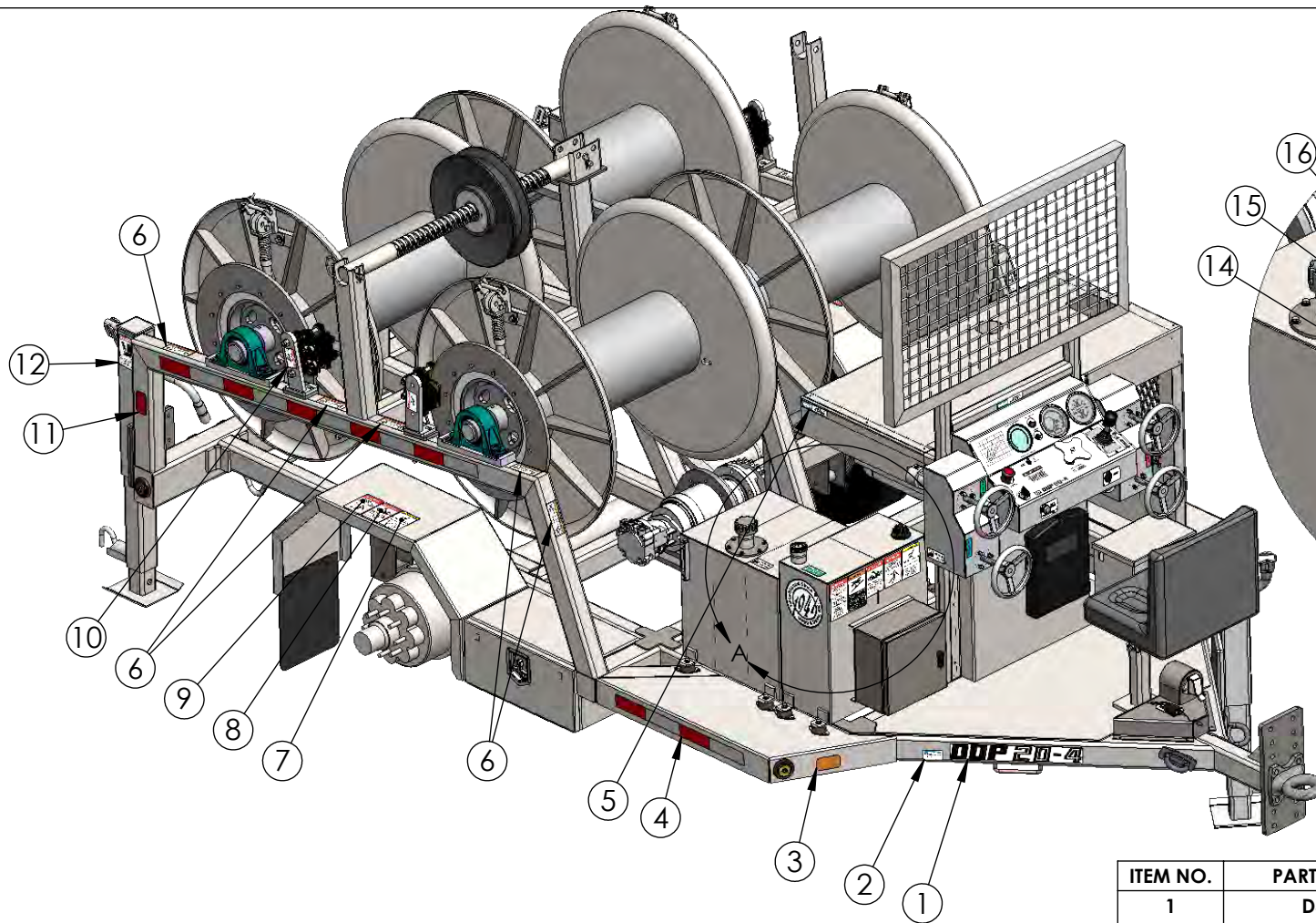
T19001
(10)



D30060
(1)

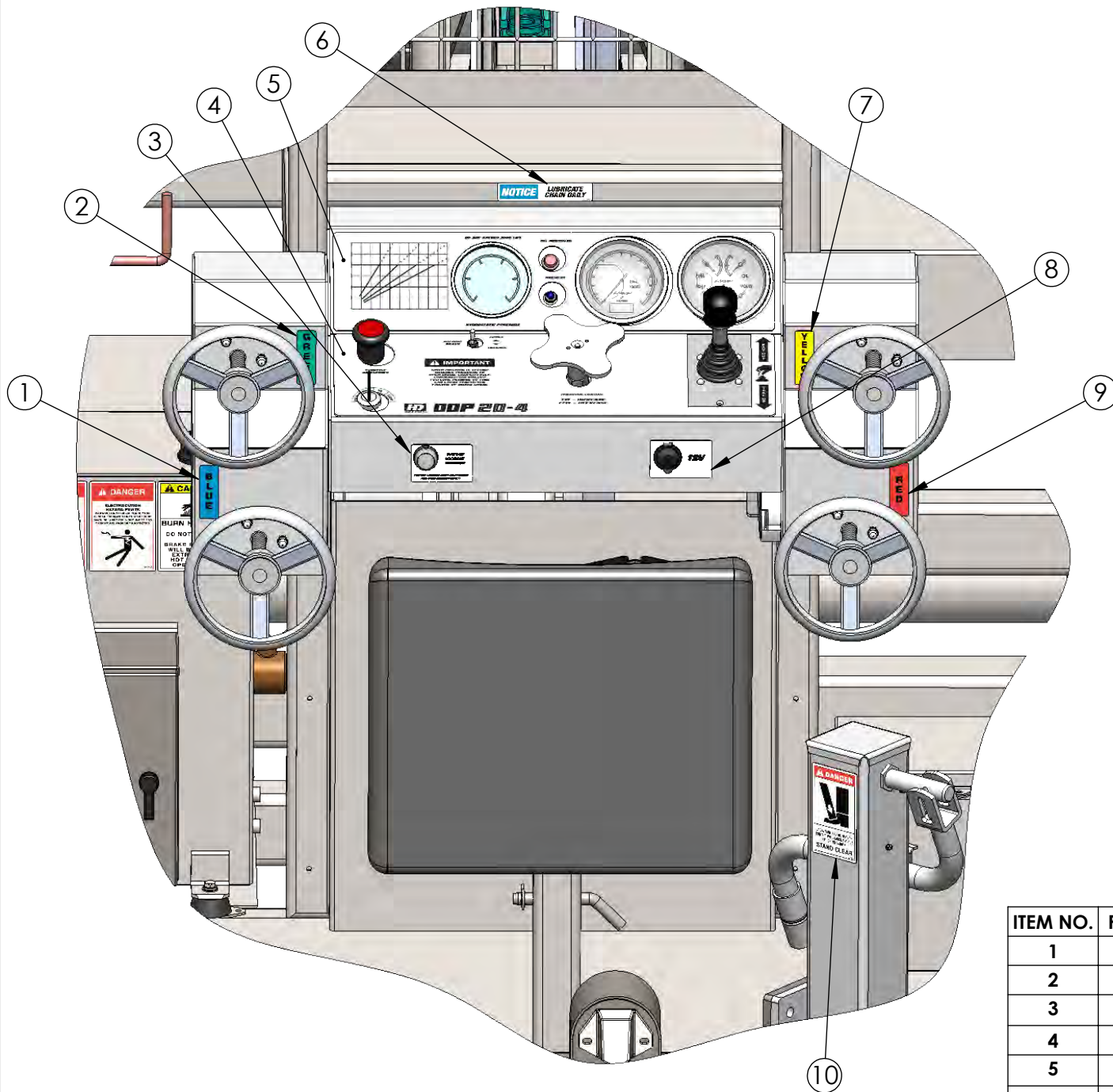


D30061
(1)

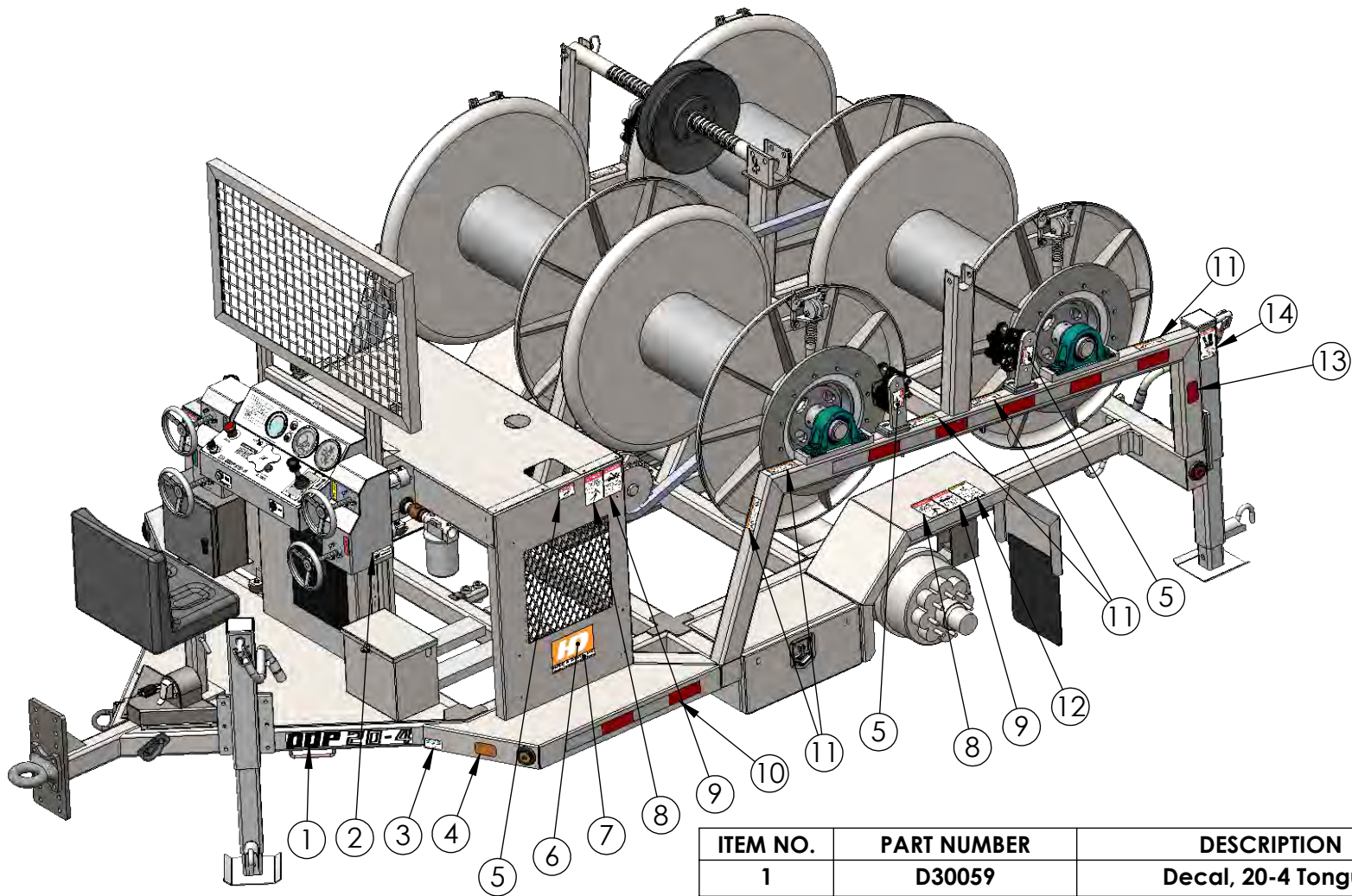


DETAIL A
SCALE 1 : 12

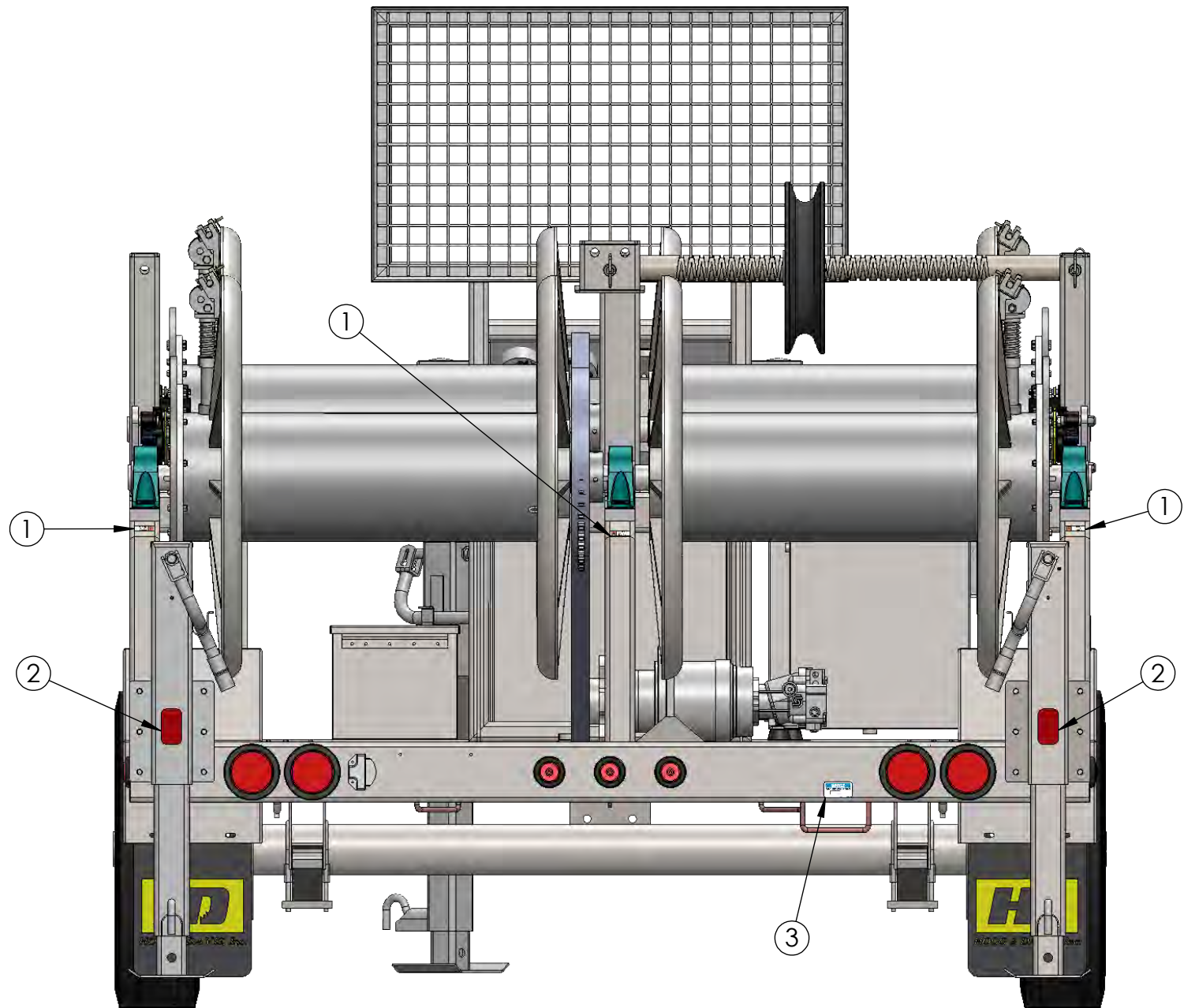
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	D30059	Decal, 20-4 Tongue	2
2	D30034	Decal, Grounding Lug	3
3	R09044	Reflector, Amber 2x3-1/2	2
4	T19001	Red/White Reflective tape	14
5	D30069	Decal, Lubricate Chain Daily	2
6	D30042	Decal, Keep Hands Clear	11
7	D30127	Decal, Burn Hazard	3
8	D30028	Decal, Danger Twisty Man	4
9	D30036	Decal, Electrocution Hazard	4
10	D30015	Decal, Hot Surface	5
11	R09043	Reflector, Red 2x3-1/2	4
12	D30026	Decal, Danger Stand Clear	3
13	D30128	Established 1947	1
14	D30010	Decal, Hydraulic Fluid Only	3
15	D30009	Decal, Diesel Fuel Only	1
16	D30021	Decal, Untrained Operator	1
17	D30022	Decal, Danger Fluid Pressure	1



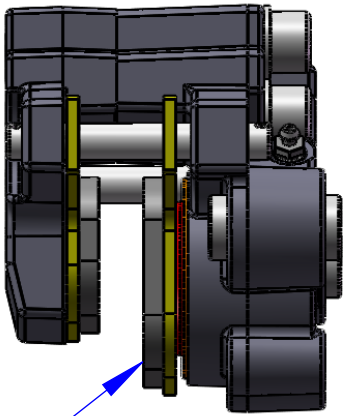
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	D30063	Decal, Blue Reel	1
2	D30064	Decal, Green Reel	1
3	D30068	Decal, Payout Lockout Release	1
4	D30060	Decal, Lower Control	1
5	D30061	Decal, Upper Control	1
6	D30069	Decal, Lubricate Chain Daily	2
7	D30065	Decal, Yellow Reel	1
8	D30083	Decal, 12v Socket	1
9	D30062	Decal, Red Reel	1
10	D30026	Decal, Danger Stand Clear	3



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	D30059	Decal, 20-4 Tongue	2
2	D30010	Decal, Hydraulic Fluid Only	3
3	D30034	Decal, Grounding Lug	3
4	R09044	Reflector, Amber 2x3-1/2	2
5	D30015	Decal, Hot Surface	5
6	D30001	HD Logo 6x9	1
7	D30018	Decal, HD 1/2" x 9"	1
8	D30036	Decal, Electrocution Hazard	4
9	D30028	Decal, Danger Twisty Man	4
10	T19001	Red/White Reflective tape	14
11	D30042	Decal, Keep Hands Clear	11
12	D30127	Decal, Burn Hazard	3
13	R09043	Reflector, Red 2x3-1/2	4
14	D30026	Decal, Danger Stand Clear	3



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	D30042	Decal, Keep Hands Clear	11
2	R09043	Reflector, Red 2x3-1/2	4
3	D30034	Decal, Grounding Lug	3

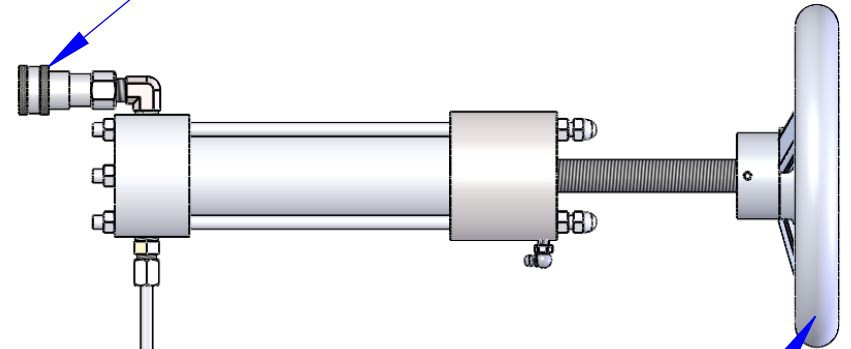


P01052
pad set
new linings are @5/16" thick

C28072 male
quick connect
fitting

Step 4: pump system up to @ 500psi and look for leaks. When finished, let the pressure in the system reach zero, then disconnect oil supply.

Step 2: attach pressurized hydraulic oil source to connector
ISO46 Hydraulic oil



Step 3: crack bleeder and pump oil through system until no more air comes out of the caliper

Step 1: back handle all the way out, turn in 1-1/2 turns.

